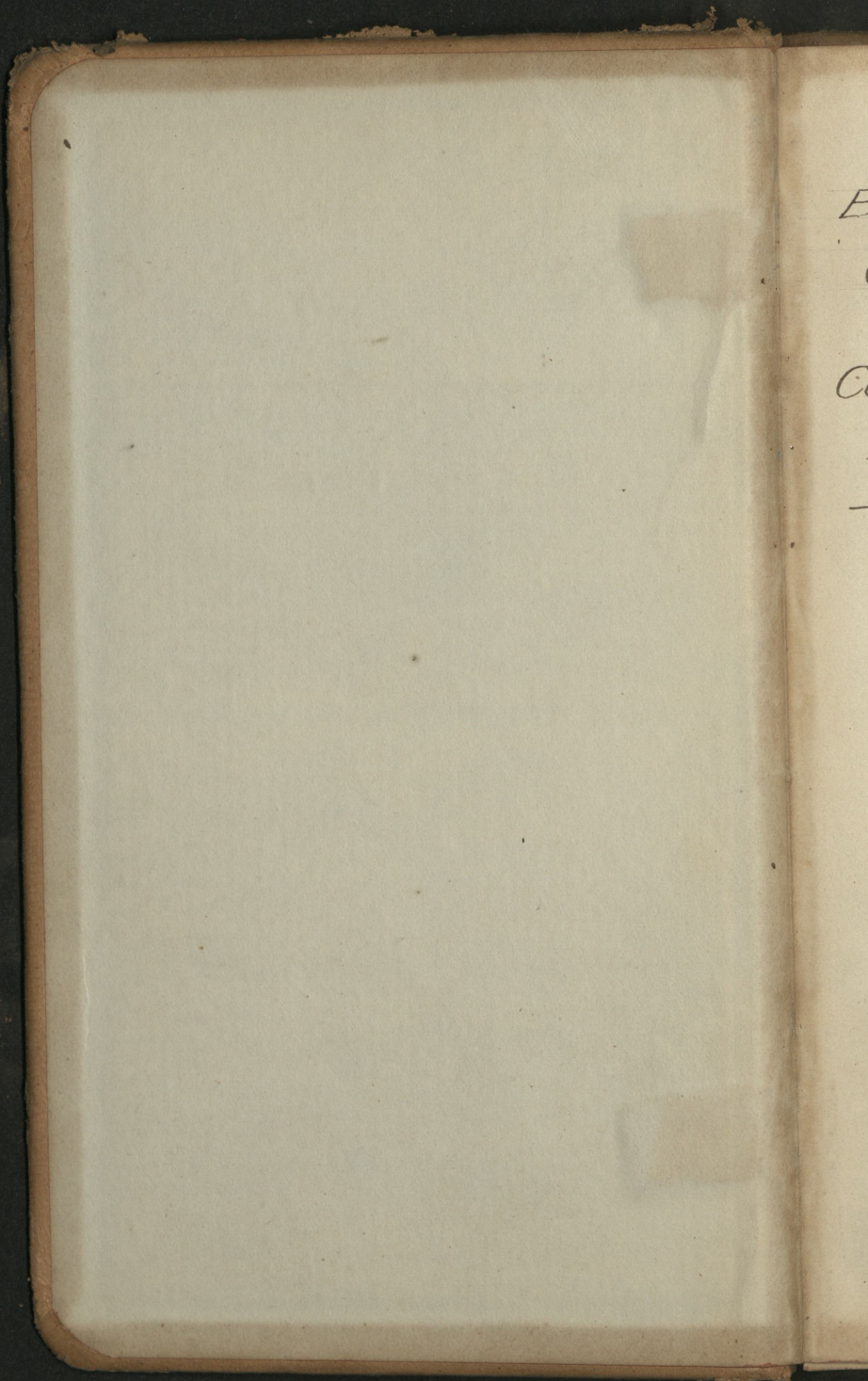


58 B8

LEVEL BOOK.

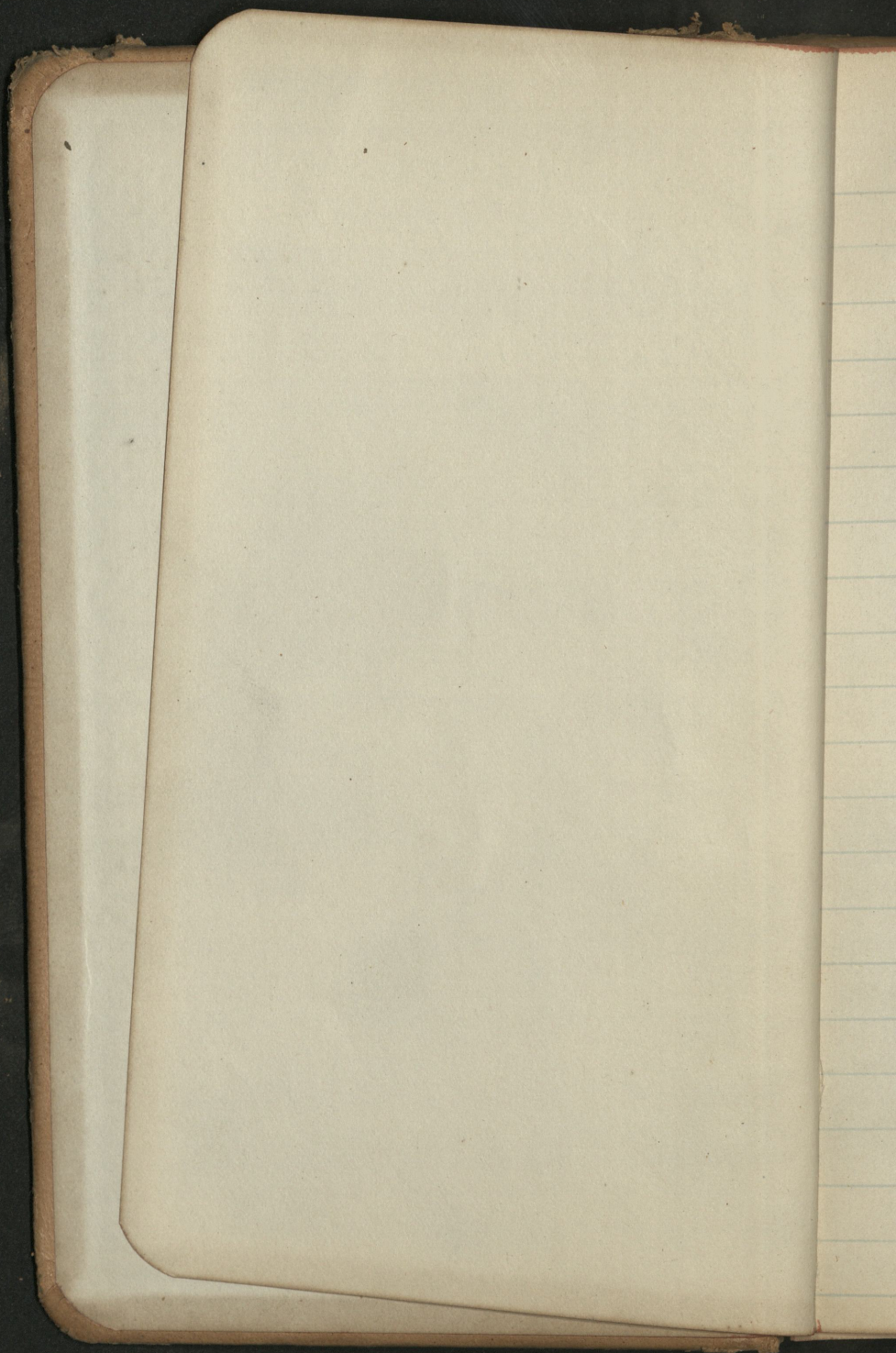
410.

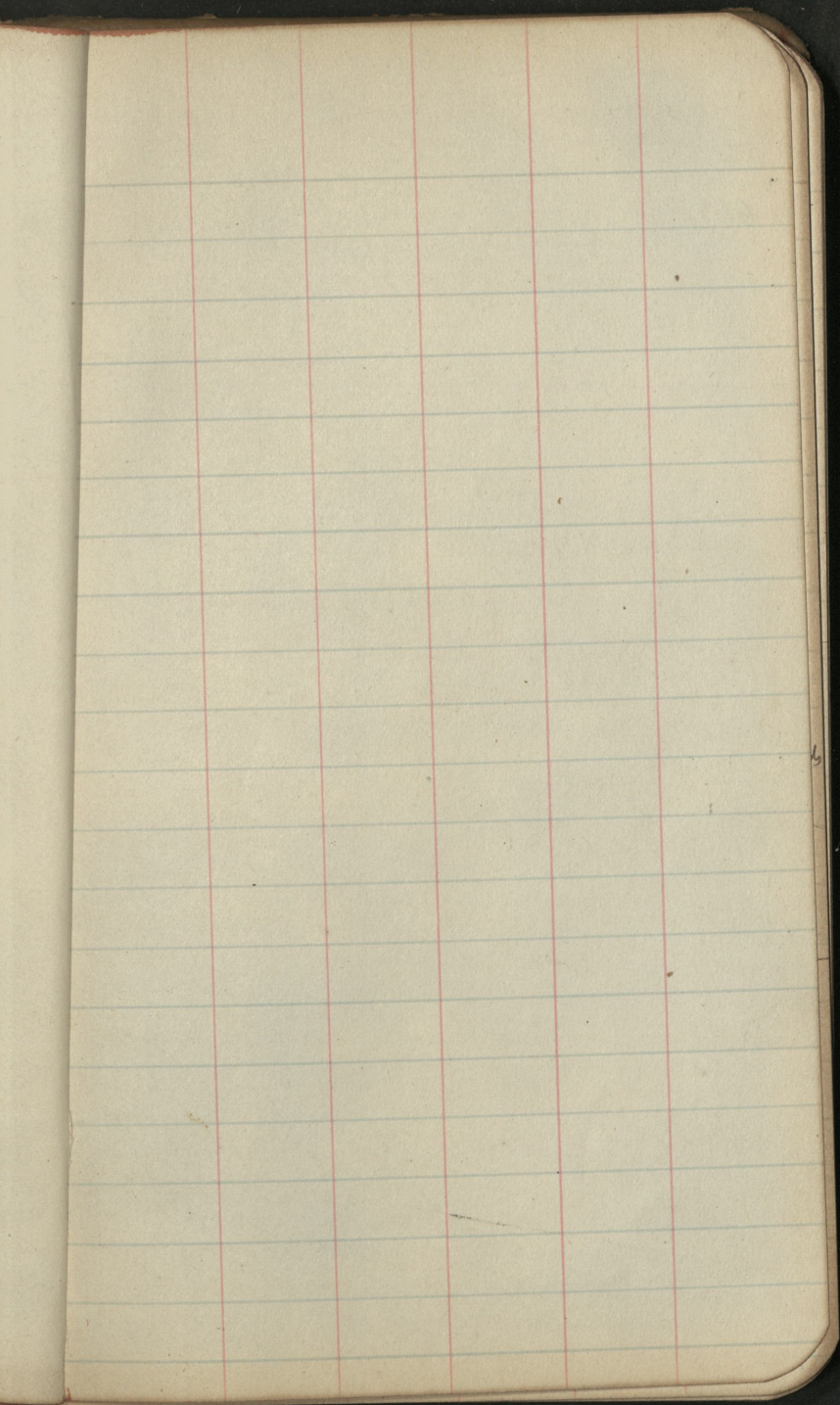


BRADSHAW MOUNTAIN RAILROAD
CROWN KING BRANCH

Construction Notes

Book No. 4





Section 14

Sta

L C R

661

$$\begin{array}{r} +18.00 \\ 8.8 \overline{) 25} \end{array} \quad \begin{array}{r} 0.6 \\ 14.1 \end{array}$$

+15

$$\begin{array}{r} +11.00 \\ 8.3 \overline{) 50} \end{array} \quad \begin{array}{r} 1.7 \\ 19.9 \end{array}$$

+25

$$\begin{array}{r} +30.00 \\ 8.8 \overline{) 0.0} \end{array} \quad \begin{array}{r} 0.0 \\ 13.3 \end{array}$$

+85

$$\begin{array}{r} +45.00 \\ 9.2 \overline{) 20} \end{array} \quad \begin{array}{r} 2.0 \\ 50.0 \end{array}$$

662 +105

$$\begin{array}{r} +65.00 \\ 9.6 \overline{) 25} \end{array} \quad \begin{array}{r} 2.5 \\ 80.0 \end{array}$$

+50

$$\begin{array}{r} +77.00 \\ 9.9 \overline{) 50} \end{array} \quad \begin{array}{r} 5.0 \\ 86.0 \end{array}$$

663

$$\begin{array}{r} +91.00 \\ 10.2 \overline{) 56} \end{array} \quad \begin{array}{r} 5.6 \\ 88.0 \end{array}$$

+20

$$\begin{array}{r} +114.00 \\ 10.9 \overline{) 90} \end{array} \quad \begin{array}{r} 7.8 \\ 90.0 \end{array}$$

+55

$$\begin{array}{r} +32.00 \\ 8.8 \overline{) 20} \end{array} \quad \begin{array}{r} 2.0 \\ 80.0 \end{array}$$

+59 0381895

+75

$$\begin{array}{r} 0.0 \\ 8.0 \overline{) 26} \end{array} \quad \begin{array}{r} 2.6 \\ 15.6 \end{array}$$

Areas Cub. Yds.
Cut Fill Exc Emb.

495 21.43

Sta 661 to 662 + 0.5

1.8 20.2 Emb 50.5 cu.
made from Cuts.

1.65 51.27

2.5 12.2

12.00 14.70

49.1 17.8

32.20 1.30

29.7 0.3

48.00 0.0

50.5

Ship 9.2
111.9

Sta 661 to 663 + 75 C.P. 71.67 Cuts
Class Ships 1/2 L.R. = 67.9 C.P.
Balance Solid Rock = 64.8 "

86.25

S. 40.6

174.3 Haul 191.7 Haul

102.00

520 from 662 to 664 + 35
= 910 Haul

S. 15.2
89.5

139.61

S. 47.9
109.7

29.60 0.0

S. 23.0
7.3

12.5

0.0 50.63 711.7

92.1

104.6

V

Sta	Grade	L	C	R
664		$\frac{-3.2}{11.8}$	$\frac{-5.5}{-}$	$\frac{-11.2}{23.8}$

+30	Lie -	$\frac{-12.4}{20.6}$	$\frac{-}{17.1}$	$\frac{-20.5}{37.8}$
-----	-------	----------------------	------------------	----------------------

+40		$\frac{-9.4}{21.1}$	$\frac{-}{15.2}$	$\frac{-25.5}{40.5}$
-----	--	---------------------	------------------	----------------------

+49 3816.10

+75		$\frac{-4.2}{13.3}$	$\frac{-}{7.2}$	$\frac{-14.5}{28.8}$
-----	--	---------------------	-----------------	----------------------

665+30		$\frac{0.0}{8.0}$	$\frac{-}{1.6}$	$\frac{-6.5}{16.8}$
--------	--	-------------------	-----------------	---------------------

350 -

+65		$\frac{+6.3}{9.6}$	$\frac{+}{2.8}$	$\frac{0.0}{8.0}$
-----	--	--------------------	-----------------	-------------------

Add Boulder 15.04.

+80	3811.52	$\frac{+6.6}{9.7}$	$\frac{+}{4.8}$	$\frac{+1.6}{8.4}$
-----	---------	--------------------	-----------------	--------------------

666+15		$\frac{+5.5}{9.6}$	$\frac{+}{3.2}$	$\frac{0.0}{8.0}$
--------	--	--------------------	-----------------	-------------------

Lie -

+55		$\frac{0.0}{8.0}$	$\frac{-}{2.5}$	$\frac{-6.0}{16.0}$
-----	--	-------------------	-----------------	---------------------

+65		$\frac{0.0}{8.0}$	$\frac{-}{2.6}$	$\frac{-8.1}{19.2}$
-----	--	-------------------	-----------------	---------------------

Areas		Cub. Yds.	
Cut	Fill	Exc.	Emb.
	148.30		104.6 Sta 663+55 to 665+65
			Emb 1620.9 Cy.
			447.5 Made from Cuts
	657.22		
		238.1	
	628.31		
		547.9	
	217.01		
		264.0	
0.0	42.59		
		21.5	18.4
49.84	0.0		1620.9
		35.0	Sta 665+30 to 666+55
			Exc. 187.7 Cy. Solid Rock
76.24			Have 1370 do you
		81.9	" 27.9 N. "
50.16	0.0		Sta 666+15 to 666+75
		24.8	25.2 Emb 57.4 Made
			from cuts
0.0	51.00	164.7	
		23.0 = 187.7	
			21.2
	637.1		
		9.0	
		55.4	

Sta	Grade	L	C	R
666+70	380861	$\frac{0.0}{8.0}$	1.9	$\frac{-3.7}{12.6}$

+75		$\frac{+1.6}{8.4}$	+0.5	$\frac{0.0}{8.0}$
-----	--	--------------------	------	-------------------

667+10		$\frac{+11.2}{10.8}$	7.7	$\frac{+5.3}{9.3}$
--------	--	----------------------	-----	--------------------

+25		$\frac{+11.3}{10.8}$	7.8	$\frac{+5.5}{14.5}$
-----	--	----------------------	-----	---------------------

+40		$\frac{+10.9}{10.7}$	8.2	$\frac{+6.1}{13.5}$
-----	--	----------------------	-----	---------------------

+65		$\frac{+8.7}{10.2}$	6.9	$\frac{+5.7}{13.5}$
-----	--	---------------------	-----	---------------------

668		$\frac{0.0}{8.0}$	1.4	$\frac{+1.3}{16.0}$
-----	--	-------------------	-----	---------------------

+05		$\frac{-0.9}{8.5}$	0.2	$\frac{0.0}{8.0}$
-----	--	--------------------	-----	-------------------

+25		$\frac{-6.1}{16.2}$	5.4	$\frac{-5.6}{15.4}$
-----	--	---------------------	-----	---------------------

+50		$\frac{-11.6}{23.0}$	7.4	$\frac{-12.0}{23.5}$
-----	--	----------------------	-----	----------------------

-286

Areas Cub. Yds
Cut Fill Exc. Emb.

0.0 3252

0.6 2.0

57.4

1050

00

Ex. 433

99.7

666 + 70% 668 + 05

143.39

Exp. 1168.0 Cub. Yds. S. Road

Exc 71.5

88.4

Haul 63 So far

" 324. " "

174.89

" 760 from 67 + 25% 668 + 85

E 96.8

= 1140 Haul

98.4

179.50

E 187.4

153.0

151.05

E 134.3

115.3

27.00

0.0

1.6

0.3

0.0

4.80

1090.3

77.7 56

1168.0

48.5

126.27

230.7

370.90

737.9

1016.9

Sta Grade

L C R

668+80

$$\begin{array}{r} -20.0 \quad 230 \\ 34.5 \quad 310 \quad 230 \end{array} \quad \begin{array}{r} -18.8 \\ 32.9 \end{array}$$

+90

$$\begin{array}{r} -17.0 \quad 230 \\ 30.3 \quad 260 \end{array} \quad \begin{array}{r} -24.5 \\ 26.2 \end{array} \quad \begin{array}{r} -21.2 \\ 20.0 \end{array} \quad \begin{array}{r} 36.2 \end{array}$$

669+05

$$\begin{array}{r} -13.5 \\ 25.6 \end{array} \quad \begin{array}{r} -27.6 \\ 21.2 \end{array} \quad \begin{array}{r} -22.6 \\ 28.0 \end{array} \quad \begin{array}{r} 38.0 \end{array}$$

669+20

$$\begin{array}{r} -14.6 \\ 27.1 \end{array} \quad \begin{array}{r} -23.6 \\ 20.7 \end{array} \quad \begin{array}{r} -22.5 \\ 23.0 \end{array} \quad \begin{array}{r} -22.5 \\ 38.0 \end{array} \quad \begin{array}{r} 37.9 \end{array}$$

+40

$$\begin{array}{r} -11.0 \\ 22.1 \end{array} \quad \begin{array}{r} -19.0 \\ 29.0 \end{array} \quad \begin{array}{r} -34.0 \\ 29.0 \end{array} \quad \begin{array}{r} -34.4 \\ 54.3 \end{array}$$

+60

$$\begin{array}{r} -9.5 \\ 20.1 \end{array} \quad \begin{array}{r} -15.9 \\ 15.9 \end{array} \quad \begin{array}{r} -26.9 \\ 44.0 \end{array}$$

670

$$\begin{array}{r} -4.8 \\ 13.6 \end{array} \quad \begin{array}{r} -9.1 \\ 9.1 \end{array} \quad \begin{array}{r} -18.2 \\ 32.0 \end{array}$$

+50

$$\begin{array}{r} -1.0 \\ 8.5 \end{array} \quad \begin{array}{r} -2.5 \\ 2.5 \end{array} \quad \begin{array}{r} -12.0 \\ 25.0 \end{array}$$

+55

$$\begin{array}{r} 0.0 \\ 8.0 \end{array} \quad \begin{array}{r} -1.4 \\ 1.4 \end{array} \quad \begin{array}{r} -9.0 \\ 20.5 \end{array}$$

+63.3 3797.43

+80

$$\begin{array}{r} -10.4 \\ 9.4 \end{array} \quad \begin{array}{r} -4.1 \\ 4.1 \end{array} \quad \begin{array}{r} 0.0 \\ 8.0 \end{array}$$

Areas	Emb Yds.
Fill Cut	Emb Exc.
957.40	1016.9 ✓ Sta 668 to 670 + 80 ✓
	380.1 Emb. 4883.1 Cuts.
1095.20	4874 Cub yds. made 554.9 from cuts
902.51	11.1 Cu. Loose Rock removed 504.2 ✓
912.65	
	733.8
1068.65	
	631.7
636.99	
	685.2 ✓
287.98	
	347.6
87.38	
	12.8
57.45 0.00	
0.0 57.27	15.9 17.6 4883.1 slip 19.0 88.1 slip 50.5 175.2 ✓

Sta Grade

L

C

R

671+05

$$\begin{array}{r} +11.7 \\ 10.9 \end{array}$$

+7.4

$$\begin{array}{r} 0.0 \\ 12.5 \end{array}$$

+20

-331

$$\begin{array}{r} +13.7 \\ 11.4 \end{array}$$

+6.8

$$\begin{array}{r} 0.0 \\ 14.4 \end{array}$$

671+53.3 Back

=671+58.1 Ford. 3794.45

$$\begin{array}{r} +15.5 \\ 11.9 \end{array}$$

+9.6

$$\begin{array}{r} 0.0 \\ 18.5 \end{array}$$

+15

-350

$$\begin{array}{r} +15.2 \\ 11.8 \end{array}$$

+10.1

$$\begin{array}{r} 0.0 \\ 20.3 \end{array}$$

+88.6

3793.39

672+10

$$\begin{array}{r} +11.7 \\ 10.9 \end{array}$$

+6.5

$$\begin{array}{r} 0.0 \\ 17.0 \end{array}$$

+40

-317

$$\begin{array}{r} +8.1 \\ 10.0 \end{array}$$

+3.3

$$\begin{array}{r} 0.0 \\ 8.0 \end{array}$$

+60

$$\begin{array}{r} +7.8 \\ 10.0 \end{array}$$

+4.2

$$\begin{array}{r} 0.0 \\ 9.6 \end{array}$$

+78.6

3790.54

+90

$$\begin{array}{r} +4.5 \\ 9.1 \end{array}$$

+1.2

$$\begin{array}{r} 0.0 \\ 3.0 \end{array} \quad \begin{array}{r} -3.8 \\ 12.7 \end{array}$$

673

$$\begin{array}{r} +5.6 \\ 9.4 \end{array}$$

+1.1

$$\begin{array}{r} 0.0 \\ 2.0 \end{array} \quad \begin{array}{r} -7.7 \\ 18.6 \end{array}$$

+15

-286

$$\begin{array}{r} +8.0 \\ 10.0 \end{array}$$

+3.7

$$\begin{array}{r} 0.0 \\ 8.0 \end{array}$$

Areas
Cut Fill Cub. Yds.
Exc. Emb.
175.2

133.38

Slip 68.5
76.6 Sta 670+55 to 676+55

142.52

Slip 94.2
216.1 Exc. 2017.5 Cy. Solid Rock

207.92

Slip 15.6 Haul 238.5 to 400
" 1560 from 72+10 to 69+40
= 4210. Haul
134.9

222.91

Slip 15.9 Borrow in R. for backfilling
233.6 Loose Rock 18.9 Cub.

137.48

S. 10.2
110.9

6210

49.8

72.36

0.0

54.2 2.5

25.26

7.60

10.0 5.0

28.67

19.25

26.1 3.6
11.1

65.30

0.0

S. 5.8
59.6

1357.2

✓ 49.8

Sta	Grade	L	C	R
673+35		$\frac{+8.3}{10.1}$	$\frac{+5.3}{}$	$\frac{0.0}{13.5}$

+70		$\frac{+9.3}{10.3}$	$\frac{+}{5.3}$	$\frac{0.0}{13.0}$
-----	--	---------------------	-----------------	--------------------

+90		$\frac{+9.5}{10.4}$	$\frac{+}{7.4}$	$\frac{0.0}{12.4}$
-----	--	---------------------	-----------------	--------------------

674		$\frac{+9.6}{10.4}$	$\frac{+}{6.9}$	$\frac{0.0}{18.0}$
-----	--	---------------------	-----------------	--------------------

+05		$\frac{+8.4}{10.1}$	$\frac{+}{6.0}$	$\frac{0.0}{21.0}$
-----	--	---------------------	-----------------	--------------------

+30		$\frac{+5.4}{9.4}$	$\frac{+}{2.8}$	$\frac{0.0}{10.0}$
-----	--	--------------------	-----------------	--------------------

+55		$\frac{0.0}{8.0}$	$\frac{-}{2.3}$	$\frac{-5.4}{15.1}$
-----	--	-------------------	-----------------	---------------------

+90		$\frac{-4.1}{13.2}$	$\frac{-}{7.7}$	$\frac{-15.4}{30.1}$
-----	--	---------------------	-----------------	----------------------

675+20		$\frac{-0.5}{7.8}$	$\frac{-}{3.8}$	$\frac{-1.3}{24.0}$
--------	--	--------------------	-----------------	---------------------

+30		$\frac{0.0}{8.0}$	$\frac{-}{3.3}$	$\frac{-1.0}{23.5}$
-----	--	-------------------	-----------------	---------------------

-2.86

Areas Cub. Yds
Cut Fill Exc. Emb.

95.74
s. 26.4
126.2

98.95
s. 13.3
81.9

122.36
s. 12.2
49.9

136.38
24.4

126.90
s. 14.9
80.0

45.85 0.0

0.0 45.46 14.1 14.0
1798.5
219.0 56
2017.5

Scale 74 + 30 to 64 + 85

181.8 Emb. 498.0 Cy.

234.96

Made from Cut
North

187.0

101.72

35.6

0.0 90.47

0.7 68.5
486.9

✓ 94.4

Sta	Grade	L	C	R
-----	-------	---	---	---

675+60		$\frac{+1.2}{8.3}$ $\frac{0.0}{5.0}$	$\frac{-2.1}{2.1}$	$\frac{-4.0}{13.0}$
--------	--	--------------------------------------	--------------------	---------------------

+85		$\frac{+6.0}{9.5}$	$\frac{+0.5}{0.5}$	$\frac{0.0}{8.0}$
-----	--	--------------------	--------------------	-------------------

676		$\frac{+7.7}{9.9}$	$\frac{+2.4}{2.4}$	$\frac{+1.6}{8.4}$ $\frac{0.0}{15.0}$
-----	--	--------------------	--------------------	---------------------------------------

+25		$\frac{+14.3}{11.6}$	$\frac{+10.8}{10.0}$	$\frac{+8.0}{10.0}$ $\frac{0.0}{0.0}$
-----	--	----------------------	----------------------	---------------------------------------

+45		$\frac{+17.0}{12.3}$	$\frac{+13.5}{13.5}$	$\frac{+12.4}{11.1}$
-----	--	----------------------	----------------------	----------------------

+60		$\frac{+13.9}{11.5}$	$\frac{+12.9}{12.9}$	$\frac{+10.7}{10.7}$
-----	--	----------------------	----------------------	----------------------

677		$\frac{+12.4}{11.1}$	$\frac{+9.3}{9.3}$	$\frac{+6.2}{9.6}$
-----	--	----------------------	--------------------	--------------------

+40		$\frac{+8.6}{10.2}$	$\frac{+6.2}{6.2}$	$\frac{+3.5}{8.9}$
-----	--	---------------------	--------------------	--------------------

+56.1	3716.87			
-------	---------	--	--	--

+60		$\frac{+3.1}{8.8}$	$\frac{+2.1}{2.1}$	$\frac{0.0}{8.0}$
-----	--	--------------------	--------------------	-------------------

+70		$\frac{+0.8}{8.2}$	$\frac{0.0}{0.0}$	$\frac{-3.1}{11.7}$
-----	--	--------------------	-------------------	---------------------

Areas
Cut Fill Exs. Emb. ✓

1.80 3290

14.0 11.1

28.38 00

Ex. 74.7
24.3

4980 ✓

59.16

Sta 675+30 to 678+60

Ex 171.2
122.7

Exc. 2968.7 Cuts Solid Rock

20584

Haul 115 yds to pit

Ex 244.4
178.3

" 103.7 " N "
" 200 from 76+106.75+05 = 210 ✓
" 2550 + 76+80 + 79+70 = 7400 ✓

27555

Ex 203.6
143.7

Total Haul 7610. ✓

241.59

Ex 452.6
305.4

170.66

Ex 309.3
206.1

107.61

Ex 43.2
57.0

3004 00

Ex 53.3
6.2

13

320

1085

Ex 81.5
11.0

43

2697.2 ✓

56 ✓

Sta Grade

L

C

R

677+90

$$\begin{array}{r} +139 \\ 9.0 \end{array}$$

$$\begin{array}{r} +15 \quad 80 \\ 5.5 \quad 8.2 \end{array}$$

678+15

$$\begin{array}{r} +42 \\ 9.1 \end{array}$$

$$\begin{array}{r} +22 \quad 0.0 \\ 8.0 \end{array}$$

+20

$$\begin{array}{r} +45 \\ 9.1 \end{array}$$

$$\begin{array}{r} +25 \quad +0.6 \\ 8.2 \end{array}$$

+35

$$\begin{array}{r} +30 \\ 8.8 \end{array}$$

$$\begin{array}{r} +15 \quad 0.0 \\ 8.0 \end{array}$$

+467 3774.02

+60

$$\begin{array}{r} 90 \\ 8.0 \end{array}$$

$$\begin{array}{r} 7.5 \quad -5.4 \\ 12.4 \end{array}$$

+80

$$\begin{array}{r} -28 \\ 11.2 \end{array}$$

$$\begin{array}{r} -1.5 \quad -5.1 \\ 14.7 \end{array}$$

679

$$\begin{array}{r} -5.4 \\ 15.1 \end{array}$$

$$\begin{array}{r} -7.5 \quad -9.3 \\ 20.8 \end{array}$$

+110

$$\begin{array}{r} -12.8 \\ 26.2 \end{array}$$

$$\begin{array}{r} 18.7 \quad -20.9 \\ 38.4 \end{array}$$

+42 3770.69

+75

$$\begin{array}{r} -26.5 \\ 46.8 \end{array}$$

$$\begin{array}{r} -28.1 \quad -34.3 \\ 58.5 \end{array}$$

+95

$$\begin{array}{r} -16.5 \\ 31.8 \end{array}$$

$$\begin{array}{r} 78.0 \quad -23.1 \\ 44.7 \end{array}$$

Areas		Cub. Yds.		
Cut	Fill	Exc.	Emb.	
26.48	0.67	2697.2	5.6	Sta 677+60 to 678+15
		4,150.3		Emb. 5.8 @ 11.
		28.7	0.2	Made from Cut.
35.61	0.0		5.8	
		7.2		
42.03		4,542		
		18.5		
24.60	0.0			
		7.6	10.6	
0.0	34.20	2968.7		Sta 678+35 to 681+15
				30.1 Emb 4311.8 @ 11.
	47.07			Made from Cuts
			86.3	
	186.08			
			672.6	
	721.96			
			1564.8	
	1692.27			
			923.1	
	800.10			
			545.4	
			3832.9	

Sta Grade

680+20

L

$$\begin{array}{r} -8.1 \\ 19.2 \end{array}$$

C

11.9

R

$$\begin{array}{r} -15.6 \\ 30.4 \end{array}$$

+50 3167.21

$$\begin{array}{r} -4.8 \\ 14.2 \end{array}$$

6.4

$$\begin{array}{r} -9.7 \\ 21.6 \end{array}$$

681+05

$$\begin{array}{r} 0.0 \\ 8.0 \end{array}$$

0.5

$$\begin{array}{r} -1.0 \\ 8.5 \end{array}$$

+15 720+05

$$\begin{array}{r} +1.5 \\ 8.4 \end{array}$$

0.5

$$\begin{array}{r} 0.0 \\ 8.0 \end{array}$$

+50

$$\begin{array}{r} +3.2 \\ 8.8 \end{array}$$

2.2

$$\begin{array}{r} +1.5 \\ 8.4 \end{array}$$

682+05

$$\begin{array}{r} +1.4 \\ 8.4 \end{array}$$

0.8

$$\begin{array}{r} 0.0 \\ 8.0 \end{array}$$

+30

$$\begin{array}{r} 0.0 \\ 8.0 \end{array}$$

0.6

$$\begin{array}{r} -1.4 \\ 9.1 \end{array}$$

683

$$\begin{array}{r} -5.8 \\ 15.7 \end{array}$$

-6.3

$$\begin{array}{r} -8.1 \\ 19.2 \end{array}$$

+25

$$\begin{array}{r} -10.4 \\ 22.6 \end{array}$$

10.0

$$\begin{array}{r} -12.1 \\ 25.6 \end{array}$$

+32.4 3154.91

+45

$$\begin{array}{r} -19.8 \\ 36.7 \end{array}$$

21.3

$$\begin{array}{r} -19.9 \\ 36.9 \end{array}$$

Areas Cub. Yds.
Cut Fill Exc. Emb.

378.9 378.07

383.29 ✓

301.9

165.51 165.31

176.1

0.0 76.3

4

2.3

1.2

0.9

Sta 681+05 to 682+30 ✓

10.10 0.0

4311.8

Exc. 236.9 Cy. S. Rock ✓

Exc.

31.8

31.0

Haul 86.8 So far

37.72

" 118.0 N "

Exc.

60.9

50.8

12.16 0.0

Exc.

23.0

3.8

3.1

Sta 682+05 to 684+65 ✓

0.0 10.03

204.8

32.12 1/2 54.

Emb'd 2615.6 Cy.

236.9

218.6 2487.5 made from

158.59

Cuts.

128.1 Cut. from
221.9 meas. Pit

320.80

Class 1/2 L.R. = 42.7 Cy
7 3/4 S.R. = 85.4 "

460.6

922.79

466.4

1370.6 ✓

Sta	Grade	L	C	R
683+60		$\frac{-15.3}{29.9}$	78.0	$\frac{-21.8}{39.7}$

684	-322	$\frac{-9.6}{21.4}$	-11.9	$\frac{-14.2}{28.3}$
-----	------	---------------------	-------	----------------------

+40.4 3755.43

+55	-350	$\frac{0.0}{8.0}$	-0.8	$\frac{-2.4}{10.6}$
-----	------	-------------------	------	---------------------

+65	-350	$\frac{+1.2}{8.3}$	+0.5	$\frac{0.0}{8.0}$
-----	------	--------------------	------	-------------------

+11 3754.36

685	-327	$\frac{+3.9}{9.5}$	+5.0	$\frac{+4.1}{9.0}$
-----	------	--------------------	------	--------------------

+50	-327	$\frac{+8.7}{10.2}$	+7.4	$\frac{+6.4}{9.6}$
-----	------	---------------------	------	--------------------

+55 3751.61

686		$\frac{+10.3}{10.6}$	+8.9	$\frac{+7.7}{9.9}$
-----	--	----------------------	------	--------------------

+25	-14+95	$\frac{+11.0}{10.8}$	+9.7	$\frac{+8.5}{10.1}$
-----	--------	----------------------	------	---------------------

+50	-310	$\frac{+10.6}{10.7}$	+9.4	$\frac{+8.7}{10.0}$
-----	------	----------------------	------	---------------------

687		$\frac{+8.3}{10.1}$	+7.1	$\frac{+5.8}{9.5}$
-----	--	---------------------	------	--------------------

+31.3 3746.15

Areas		Cub. Yds.	
Cut	Fill	Exc.	Emb.

156.25

1370.6 ✓

840.9

3790.2 ✓

402.2 ✓

0.0

1584

1.1

1.9

888

0.0

2615.6 ✓

61.7 Sta 684+55 to 688+10

86.25

L.C. 1574.9 Cub. yds. ✓

203.6

Class mat from 684+55 to 686+10
1/3 Loose Rock = 258.9 cu yds. ✓

133.66

Balance of cut
Solid Rock = 1316.0 " " ✓

274.9 Haul 63 yds N from

163.23

" 123.1 " S " "

" 1240 from 86+30 to 83+65

158.6

= 3290 Haul

179.37

162.7

172.09

51.7

74

276.0

125.98

168.1

1314.1 ✓

✓
499

Sta Grade

687+40

L

+6.6
9.6

C

+6.1

R

+4.4
9.1

+80

-327

+4.1
9.0

+2.0

9.0
8.0

688+10

713+10

0.0
8.0

7.2

9.1
20.7

+153

374340

+21 H.B.

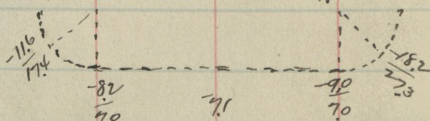
-3.2 -3.0
1.8 7.0

3.1

5.5 +4.5 -2.0
7.0 20.0 25.0

+32 Toe

-350



689+30 H.B.

+340 Back =

+277 Ford

373975

+40

-330

-1.1
8.7

2.7

-4.8
14.2

-1.4
9.1

2.0

-3.2
11.8

+85

-2.9
11.4

3.9

-4.8
14.2

690+7.7

373673

690+25

-4.1
13.2

5.0

-5.6
15.4

Areas		Cub. Yds.	
Cut	Fill	Fcs.	Emb.
101.04		1314.1	
		99.6	
33.40	0.0	12.4	18.1 Sta 687+80 to 688+32
0.0	49.07	1426.1 1488.8-34.50 1574.9	Emb 102.2 @ 4.
	141.90		38.9 Made from Cut & Emb
		45.2	102.2
	51.57		16.4
	37.00		94.9
	76.87		135.1
	105.45		310.4
			556.8

33.40

0.0

12.4

18.1

Sta 687+80 to 688+32

0.0

49.07

1426.1

1488.8-34.50

1574.9

Emb 102.2 @ 4.

38.9 Made from Cut & Emb

141.90

45.2

102.2

51.57

16.4

37.00

94.9

76.87

135.1

105.45

310.4

556.8

Sta Grade

690+75

$$\begin{array}{r} L \\ -10.5 \\ \hline 22.7 \end{array}$$

$$\begin{array}{r} C \\ 8.1 \end{array}$$

$$\begin{array}{r} R \\ -7.6 \\ \hline 18.4 \end{array}$$

+95

$$\begin{array}{r} -17.6 \\ \hline 33.4 \end{array}$$

$$\begin{array}{r} 15.8 \end{array}$$

$$\begin{array}{r} -12.4 \\ \hline 25.6 \end{array}$$

691+15

$$\begin{array}{r} -12.1 \\ \hline 25.2 \end{array}$$

$$\begin{array}{r} -21.2 -25.0 -25.8 \\ \hline 17.9 \quad 26.0 \quad 30.0 \quad 45.7 \end{array}$$

+50

$$\begin{array}{r} -5.0 \\ \hline 14.5 \end{array}$$

$$\begin{array}{r} 6.8 \end{array}$$

$$\begin{array}{r} -12.9 -11.4 \\ \hline 18.0 \quad 24.1 \end{array}$$

+95

$$\begin{array}{r} -3.9 \\ \hline 12.9 \end{array}$$

$$\begin{array}{r} 6.9 \end{array}$$

$$\begin{array}{r} -7.4 \\ \hline 18.1 \end{array}$$

692

-3.18

$$\begin{array}{r} 0.0 \\ \hline 8.0 \end{array}$$

$$\begin{array}{r} 0.9 \end{array}$$

$$\begin{array}{r} -2.0 \\ \hline 10.0 \end{array}$$

+20

$$\begin{array}{r} +2.2 \\ \hline 8.6 \end{array}$$

$$\begin{array}{r} +0.9 \end{array}$$

$$\begin{array}{r} 9.0 \\ \hline 8.0 \end{array}$$

+50

$$\begin{array}{r} +5.0 \\ \hline 9.3 \end{array}$$

$$\begin{array}{r} +3.8 \end{array}$$

$$\begin{array}{r} +2.6 \\ \hline 8.7 \end{array}$$

693

$$\begin{array}{r} +6.4 \\ \hline 9.6 \end{array}$$

$$\begin{array}{r} +5.3 \end{array}$$

$$\begin{array}{r} +4.2 \\ \hline 9.1 \end{array}$$

+50

$$\begin{array}{r} +6.2 \\ \hline 9.6 \end{array}$$

$$\begin{array}{r} +5.3 \end{array}$$

$$\begin{array}{r} +4.7 \\ \hline 9.2 \end{array}$$

Areas		Cub. Yds.	
Cut	Fill	Exc.	Emb.
	22980		556.8
			Sta 689+30 to 692+20
			296.6 Emb 2238.8 Cu. Yds.
	57110		1188.4 Cy. made from cuts + surle on borrowd max.
	76814		731.2 Cy. made from
		640.9	Borrow Pit extra mtdth of cut 692+80
	22095		319.2 from Pit alongside
		170.0	
	14650		Class Borrow L. Rock 1050.4 Cu. Yds.
		74.8	Haul 731.2 yds 180 ft = 131.0 Haul
0.0	1510		
		4.0	3.7
1627	00		2238.8
		44.9	692 to 694+35 Exc. 5590.5 R
6460			Haul 95.4 So far
		144.9	+ 400 from 93+30 to 94+40 = 760
91.95			
		171.6	
93.42		115.7	
		480.5	

Sta	Grade	L	C	R
694		$\frac{+2.3}{8.6}$	$\frac{+1.8}{7.8}$	$\frac{+1.6}{8.4}$

+15		$\frac{+1.2}{8.3}$	$\frac{+0.9}{7.9}$	$\frac{0.0}{8.0}$
-----	--	--------------------	--------------------	-------------------

818
- 318

+35		$\frac{0.0}{8.0}$	$\frac{-0.6}{7.4}$	$\frac{-1.6}{9.4}$
-----	--	-------------------	--------------------	--------------------

+55		$\frac{-3.0}{11.5}$	$\frac{3.2}{7.2}$	$\frac{-4.0}{13.0}$
-----	--	---------------------	-------------------	---------------------

+84 3121.40

695		$\frac{-11.2}{23.8}$	$\frac{-11.7}{11.7}$	$\frac{-12.0}{25.0}$
-----	--	----------------------	----------------------	----------------------

+10		$\frac{-9.9}{21.9}$	$\frac{11.8}{7.8}$	$\frac{-14.8}{29.2}$
-----	--	---------------------	--------------------	----------------------

835
- 335

+45		$\frac{-3.8}{12.1}$	$\frac{5.8}{5.8}$	$\frac{-8.4}{19.6}$
-----	--	---------------------	-------------------	---------------------

+70		$\frac{-1.6}{9.4}$	$\frac{7.8}{7.8}$	$\frac{-4.5}{13.8}$
-----	--	--------------------	-------------------	---------------------

+14 3118.38

696+05		$\frac{-1.9}{9.9}$	$\frac{3.1}{3.1}$	$\frac{-3.0}{11.5}$
--------	--	--------------------	-------------------	---------------------

+30		$\frac{-6.3}{16.5}$	$\frac{10.1}{10.1}$	$\frac{-18.0}{34.0}$
-----	--	---------------------	---------------------	----------------------

848
- 348

Areas
Cut Fill Exs. Emb.

30.90

+80.5

11.9

12.13

0.0

3.0

2.7

0.0

108.2

495.4

63.6 = 15.56

559.0

27.6

Sub 694 + 15 to 697 + 10

Emb'd 1643.8 Cy.

63.70

247.4 made from

358.7

Cut & Surr on
borrowed matl.

366.68

1396.4 from meas
Borrow Pit.

139.7

Class 85% Earth = 1186.9

15% L.R. = 209.5

387.94

m.L. Haul 194 yds 200' = 388.

m.R. " 220 " 170 = 372

339.8

Haul

760

136.37

82.7

42.23

60.0

50.32

180.7

340.08

211.4

1403.3

✓
444

Sta Grade

L

C

R

696+45

$$\begin{array}{r} -11.5 \\ 24.3 \end{array}$$

14.2

$$\begin{array}{r} -11.2 \\ 23.8 \end{array}$$

+70

$$\begin{array}{r} -3.7 \\ 12.6 \end{array}$$

2.5

$$\begin{array}{r} -13.1 \\ 11.7 \end{array}$$

+85

$$\begin{array}{r} 0.0 \\ 8.0 \end{array}$$

0.6

$$\begin{array}{r} -1.2 \\ 8.8 \end{array}$$

697+10

$$\begin{array}{r} +2.0 \\ 8.5 \end{array}$$

+1.1

$$\begin{array}{r} 0.0 \\ 8.0 \end{array}$$

+50

$$\begin{array}{r} +3.1 \\ 8.8 \end{array}$$

+2.2

$$\begin{array}{r} +1.2 \\ 8.3 \end{array}$$

+85

$$\begin{array}{r} +0.6 \\ 8.2 \end{array}$$

+0.7

$$\begin{array}{r} 0.0 \\ 8.0 \end{array}$$

698

$$\begin{array}{r} 0.0 \\ 8.0 \end{array}$$

7.0

$$\begin{array}{r} -1.6 \\ 9.6 \end{array}$$

+40

$$\begin{array}{r} -2.5 \\ 10.8 \end{array}$$

3.0

$$\begin{array}{r} -3.9 \\ 12.9 \end{array}$$

+70

$$\begin{array}{r} -5.6 \\ 15.4 \end{array}$$

4.5

$$\begin{array}{r} -4.9 \\ 14.4 \end{array}$$

699

$$\begin{array}{r} -9.5 \\ 21.3 \end{array}$$

8.7

$$\begin{array}{r} -8.0 \\ 19.0 \end{array}$$

+226.7 3706.08

Areas Cub. Yds.
Cut Fill Exc. Emb.

420.96

1403.3

220.0

54.8

17.6

0.0

9.24

5.3

2.9

17.08

0.0

1643.8

39.3 Sta 696+85 to 698 Exc. 74.7 Cu. Lo. Rock

36.01

Haul So fine

28.6

8.09

0.0

1.5

2.6 Sta 697+85 to 700+65

0.0

143.0

74.7

Emb. 1431.0 Cu.

53.5 28.7 made from cut

57.95

North

1145.3 Cu. from

89.9 meas. Pits on side

class 15% Exc. 171.8 Cu.

85% Lo Rock = 973.5

103.80

18.9 out
Haul 25 yds 190' = 480 Haul

236.56

315.9

480.8

Sta	Grade	L	C	R
699+30		$\frac{-10.5}{22.8}$	11.2	$\frac{-10.8}{23.2}$

+50		$\frac{-10.8}{23.2}$	11.8	$\frac{-14.0}{28.0}$
-----	--	----------------------	------	----------------------

700		$\frac{-6.0}{16.0}$	6.9	$\frac{-8.7}{20.1}$
-----	--	---------------------	-----	---------------------

+45		$\frac{0.0}{8.0}$	0.8	$\frac{-1.6}{4.0}$
-----	--	-------------------	-----	--------------------

+65	-3.34	$\frac{+1.6}{8.4}$	+1.0	$\frac{0.0}{8.0}$
-----	-------	--------------------	------	-------------------

701		$\frac{+5.4}{9.4}$	+4.6	$\frac{+4.3}{9.1}$
-----	--	--------------------	------	--------------------

+50		$\frac{+9.0}{10.3}$	+8.5	$\frac{+8.4}{10.1}$
-----	--	---------------------	------	---------------------

702		$\frac{+10.8}{10.7}$	+10.5	$\frac{+9.8}{10.5}$
-----	--	----------------------	-------	---------------------

+50		$\frac{+8.3}{10.1}$	+7.6	$\frac{+7.4}{9.8}$
-----	--	---------------------	------	--------------------

703		$\frac{+1.0}{8.3}$	+0.4	$\frac{0.0}{8.0}$
-----	--	--------------------	------	-------------------

Areas Cub. Yds.
Cut Fill Exc. Emb.

332.15

480.8 ✓

267.0

388.86

523.0

175.99

157.1

0.0 12.56

36 3.1

146.0 0.0

1431.0 ✓

62.2 Sta 700+44 to 703+10 Exc 1270.2 ✓

81.35

Class Slips To Rock = 69.0 cu

Slip 11.0 Balance Out Solid = 1201.2 ✓
2200

156.30

Have 94.50 free

+ 178.2 N "

324.1

" 110 from 701+20 to 99+95 = 138 ✓

" 740 + 701+95 to 703+88 = 140.2 ✓

Total Have 1540 ✓

193.70

Slip 328
307.5

138.42

Slip 21.1
134.9

7.26

0.0

Slip 4.1
0.91122.2 ✓
148.0 56.

1270.2 ✓

1.2 ✓

Sta Grade

L

C

R

703+10

$$\begin{array}{r} 0.0 \\ 8.0 \end{array}$$

$$\begin{array}{r} 0.6 \end{array}$$

$$\begin{array}{r} -1.4 \\ 9.1 \end{array}$$

+30

$$\begin{array}{r} -3.6 \\ 12.4 \end{array}$$

4.8

$$\begin{array}{r} -6.8 \\ 17.2 \end{array}$$

+32.2 3692.53

+75

$$\begin{array}{r} -14.2 \\ 28.3 \end{array}$$

75.1

$$\begin{array}{r} -16.2 \\ 31.3 \end{array}$$

+90

$$\begin{array}{r} -8.2 \\ 19.3 \end{array}$$

$$\begin{array}{r} -12.1 \\ 10.0 \end{array}$$

11.4

$$\begin{array}{r} -11.6 \\ 24.4 \end{array}$$

704+10

$$\begin{array}{r} -3.6 \\ 12.4 \end{array}$$

7.8

$$\begin{array}{r} -11.0 \\ 23.5 \end{array}$$

+50

$$\begin{array}{r} -5.5 \\ 15.3 \end{array}$$

$$\begin{array}{r} -13.8 \\ 8.7 \end{array}$$

$$\begin{array}{r} -18.6 \\ 19.0 \end{array}$$

$$\begin{array}{r} -18.6 \\ 28.0 \end{array}$$

34.9

705

$$\begin{array}{r} -7.1 \\ 17.7 \end{array}$$

78.2

$$\begin{array}{r} -19.0 \\ 19.0 \end{array}$$

$$\begin{array}{r} -14.0 \\ 28.0 \end{array}$$

+15

$$\begin{array}{r} -5.7 \\ 15.6 \end{array}$$

$$\begin{array}{r} -10.9 \\ 1.0 \end{array}$$

$$\begin{array}{r} -19.0 \\ 76.0 \end{array}$$

$$\begin{array}{r} -18.8 \\ 3.0 \end{array}$$

$$\begin{array}{r} -15.8 \\ 16.0 \end{array}$$

30.7

+25

$$\begin{array}{r} -5.9 \\ 15.9 \end{array}$$

70.5

$$\begin{array}{r} -11.0 \\ 9.0 \end{array}$$

$$\begin{array}{r} -20.0 \\ 10.0 \end{array}$$

$$\begin{array}{r} -20.0 \\ 10.0 \end{array}$$

$$\begin{array}{r} -17.4 \\ 24.0 \end{array}$$

33.1

+50

$$\begin{array}{r} -5.2 \\ 14.8 \end{array}$$

$$\begin{array}{r} -14.3 \\ 8.3 \end{array}$$

$$\begin{array}{r} -19.6 \\ 22.0 \end{array}$$

$$\begin{array}{r} -22.6 \\ 23.0 \end{array}$$

$$\begin{array}{r} -22.0 \\ 38.0 \end{array}$$

40.0

Areas Cub. Yds.
Cut Fill Exc. Emb.

90 10.03

Sta 703 to 706+50 ✓

43.5 Emb 3743.2 @ 4.

107.44

301.74 Made from

Cuts ✓
552.3 725.5 Made from

555.38

measured Pits

20 4/2 Glass Borrow
Loose Rock 725.5 @ 4

179.68

Haul 18 yds 150' = 190

" 596 " 250' = 1490

137.3 Total haul 1680

191.11

374.3

314.22

774.2

521.92

277.0

475.40

132.4

239.47

269.8

343.27

248.7

3014.9

✓ 1944

Sta	Grade	L	C	R
705	+65	$\frac{-7.6}{18.4}$	72.1	$\frac{-14.4}{14.0} \frac{-24.0}{28.0} \frac{-27.5}{48.7}$

+85	$\frac{-8.0}{19.0}$	$\frac{-10.1}{9.3}$	$\frac{-17.0}{20.0} \frac{-30.5}{52.8}$
-----	---------------------	---------------------	---

706	$\frac{-3.8}{12.7}$	5.2	$\frac{-10.7}{23.1}$
-----	---------------------	-----	----------------------

+25	$\frac{0.0}{8.0}$	2.1	$\frac{-4.3}{13.5}$
-----	-------------------	-----	---------------------

+50	$\frac{+2.4}{8.6}$	+1.0	$\frac{0.0}{8.0}$
-----	--------------------	------	-------------------

707	$\frac{+7.8}{10.0}$	+6.5	$\frac{+5.4}{9.4}$
-----	---------------------	------	--------------------

+35	$\frac{+9.5}{10.4}$	+9.1	$\frac{+7.8}{10.0}$
-----	---------------------	------	---------------------

708	$\frac{+6.5}{9.6}$	+5.8	$\frac{+4.9}{9.2}$
-----	--------------------	------	--------------------

+45	$\frac{0.0}{8.0}$	0.0	$\frac{0.0}{8.0}$
-----	-------------------	-----	-------------------

+55	$\frac{4.5}{13.8} \frac{-6.2}{8.0}$	2.7	$\frac{-1.3}{9.0}$
-----	-------------------------------------	-----	--------------------

-350

Areas
Cut Fill Exs. Emb.

551.87

3014.9 ✓

426.3

599.5

206.4

14383

84.0

0.0

37.62

5.5

11.6

17.90

0.0

3743.2 ✓

Slip 10.3

123.8

Sta 706+25 to 708+45

11585

Exp. 852.0 Cu yds

Slip 28.4

180.1

Class Slips L Rock = 82.2 eq.

Balance Solids = 769.8 ✓

16202

Haul 1105 So. frk.

Slip 28.8

315.5

" 680 fm 707+55 to 708+70
= 1260 Haul ✓

10012

x 14.7

83.4

0.0

0.0

790.5

61.5 = 1/2 59.

852.0 ✓

12.6

6803

240.0

252.6 ✓

Sta	Grade	L	C	R
708+90		$\frac{-6.5}{16.8}$	11.3	$\frac{-13.0}{10.0} \quad \frac{-10.0}{22.0}$

709+30		$\frac{-4.7}{14.1}$	3.0	$\frac{-15.0}{29.5}$
--------	--	---------------------	-----	----------------------

+55		$\frac{-3.9}{12.9} \quad \frac{-5.5}{4.0}$	9.2	$\frac{-16.9}{32.4}$
-----	--	--	-----	----------------------

+70		$\frac{-6.0}{16.0}$	13.6	$\frac{-10.0}{22.0}$
-----	--	---------------------	------	----------------------

+80		$\frac{-7.6}{18.4} \quad \frac{-9.6}{6.0}$	8.6	$\frac{-3.7}{12.6}$
-----	--	--	-----	---------------------

+95		$\frac{-7.7}{18.9}$	2.5	$\frac{9.0}{8.0}$
-----	--	---------------------	-----	-------------------

710+15		$\frac{9.0}{8.0}$	3.1	$\frac{10.0}{9.3}$
--------	--	-------------------	-----	--------------------

+40		$\frac{+4.1}{9.0}$	5.7	$\frac{+6.6}{9.7}$
-----	--	--------------------	-----	--------------------

+75		$\frac{+10.8}{10.7}$	10.3	$\frac{+11.2}{10.8}$
-----	--	----------------------	------	----------------------

711		$\frac{+12.0}{11.0}$	12.1	$\frac{+12.8}{11.2}$
-----	--	----------------------	------	----------------------

-35.0

Areas		Cub. Yds.	
Cut	Fill	Exc	Emb.
	302.47		Sta 708+45 to 710+15 323.3 Emb 1099.9 Cy.
	134.35		Made from Cut N. 186.2
	267.92		161.8
	314.40		92.5
	185.05		68.4
0.0	61.28	Sip	2.3 11.5 15.1
46.81	0.0		1099.9
		S	11.4 92.6 Sta 709+95 to 711+NE 976.7 Cy.
961.0			Class Slips Lo Rock = 133.1 Cy. Balance Solid = 843.6 "
		S	31.1 191.1
198.72			Haul 205.8 So far " 580. from 10+90 to 9+10 = 1044 S. 37.2 " 142 " 11+45 to 5+30 = 876
			200.1 Haul 1920
233.51		S	25.9 176.4
			779.6

Sta	Grade	L	C	R
711 + 25		$\frac{+83}{101}$	$\frac{+78}{7.8}$	$\frac{+88}{102}$

+65		$\frac{+19}{8.5}$	$\frac{+10}{7.0}$	$\frac{0.0}{8.0}$
-----	--	-------------------	-------------------	-------------------

+75		$\frac{0.0}{8.0}$	$\frac{1.2}{7.2}$	$\frac{-2.9}{11.4}$
-----	--	-------------------	-------------------	---------------------

712		$\frac{1.5}{9.3}$	$\frac{3.4}{3.4}$	$\frac{-10.0}{22.0}$
-----	--	-------------------	-------------------	----------------------

+25		$\frac{0.0}{8.0}$	$\frac{3.2}{3.2}$	$\frac{-6.5}{16.8}$
-----	--	-------------------	-------------------	---------------------

+30		$\frac{-0.9}{8.4}$	$\frac{4.0}{4.0}$	$\frac{-5.7}{15.6}$
-----	--	--------------------	-------------------	---------------------

+35		$\frac{0.0}{8.0}$	$\frac{2.0}{2.0}$	$\frac{-5.2}{14.8}$
-----	--	-------------------	-------------------	---------------------

+55		$\frac{+4.4}{9.1}$	$\frac{+2.4}{2.4}$	$\frac{0.0}{8.0}$
-----	--	--------------------	--------------------	-------------------

+95		$\frac{+4.3}{9.1}$	$\frac{+1.7}{1.7}$	$\frac{0.0}{8.0}$
-----	--	--------------------	--------------------	-------------------

713		$\frac{+4.4}{9.1}$	$\frac{+1.0}{4.0}$	$\frac{-2.1}{10.3}$
-----	--	--------------------	--------------------	---------------------

- 350

Areas Cub. Yds
Cut. Fill Exc. Emb.

147.57

Slip 25.2

121.1

158.5

0.0

19

2.7

0.0

21.79

927.8

48.9 = 425.9

976.7

53.4

Sta 711+65 to 713+10

93.46

Emb 161.8 Cy.

722 Made from Cut n.

62.43

12.4

71.10

10.4

0.0

41.00

19.4

10.1

161.2

38.12

0.0

51.8

31.73

0.0

5.2

0.2

24.15

31.5

12.2

0.4

78.6

0.6

✓

✓

Section 14

Sta	Grade	L	C	R
713+10		$\frac{+5.0}{9.3}$	+2.5	$\frac{0.0}{8.0}$
+20	-3.65	$\frac{+5.0}{9.3}$	+2.8	$\frac{+1.3}{8.4}$
+40		$\frac{+2.0}{8.5}$	+0.9	$\frac{0.0}{8.0}$
+49	3656.95			
+65		$\frac{+6.4}{9.6}$	+4.9	$\frac{+2.9}{8.7}$
714	-3.33	$\frac{+5.6}{9.4}$	+4.3	$\frac{+2.5}{8.6}$

Areas Cub. Yds.
Cut Fill Exc Emb.

41.62 0.0

78.6

Sta 712435 to 714 E. 311.0 Cy. SR

17.0 Haul 1142 So far

49.98

1150. from 13170 to 15110 = 210 Haul

24.2

1542 0.0

45.1

8203

993

264.2

46.8 = 1256.

311.0

7110

✓

444

Section 14

Box Culverts

Stations	Size inside	FT. BM. Lumber
669+20	1x2 1/2 x 96	2738.
679+80	2x2 1/2 x 84	2806.
683+65	1x2'4" x 70	2384.
691+15	1x2 1/2 x 76	1984.
696+45	2x2 1/2 x 48	1609.
699+80	2x2'4" x 4 1/2	1823.
703+90	2x3'4" x 50.	1643.

14987

669+20 Slope Wall under Box 2.0x4.0x27 = 8.0 Cu. Yd.

Ditches Sec 14

Stations	Size	Cub. Yds. Total	L.R.	S.R.
661 to 663+75	Side Ditch on L	20.4		20.4
663+75 to 664+35	1x1.5 x 60 Slope " " "	3.3		3.3
675+30 to 678+60	Side Ditch L	24.4		24.4
689+50	Channel L 2.4x6x40	21.1		21.1
695+50 to 696+30	" L	106.7	106.7	
696+85 to 698	Side H on L	8.5		8.5
705	Channel on R	75.1	25.0	50.1
		259.5	131.7	127.8

Excavation for Culverts

Number	Size	Cubic Yards.		
		Total	Lo Rock	Solid Rock
738.	$\left. \begin{array}{l} 1 \times 4 \times 8 \\ 0.5 \times 3.2 \times 6 \\ 1.7 \times 5.5 \times 13 \end{array} \right\}$	6.0 ✓		6.0 ✓
06. ✓	$2.3 \times 4.5 \times 80$	30.7 ✓	20.4 ✓	10.3 ✓
384. ✓	$\left. \begin{array}{l} 0.5 \times 3.5 \times 40 \\ 1.8 \times 3.5 \times 30 \end{array} \right\}$	9.6 ✓	9.6 ✓	
84.	$\left. \begin{array}{l} 1.0 \times 4.0 \times 23. \\ 1.2 \times 4.0 \times 27 \\ 0.5 \times 4.0 \times 30 \end{array} \right\}$	10.4 ✓	10.4 ✓	
09. ✓	$1.0 \times 4.0 \times 57.$	8.4 ✓	8.4 ✓	
23. ✓	$1.0 \times 4.0 \times 42$	6.2 ✓	6.2 ✓	
43.	$2.0 \times 3.0 \times 10$			
	$0.5 \times 4.0 \times 8.$	2.8 ✓		2.8 ✓
87		74.1 ✓	55.0 ✓	19.1 ✓

698+85 Borrow False Bottom on L 24.0 Cy Total

5.R.

20.4

3.3

24.4

21.1

8.5

50.1

127.8

49.4

Section 14

PAGE	Slope Wall	Excavation - Cub. Yds.				Cu. Yds. Total in Banks
		Total in Cut	Earth	Loose Rock	Solid Rock	
1	✓	711.7	✓	67.9	643.8	595
2	✓	187.7	✓		187.7	1620.9
2						57.4
3	✓	1168.0	✓		1168.0	
4	✓					488.31
5	✓	2017.5	✓		2017.5	18.9
6	✓					498.0
7	✓	2968.7	✓		2968.7	
8	✓					58
8	✓					4311.8
9	✓	236.9	✓		236.9	
9	✓					2615.6
10	✓	1574.9	✓	258.9	1316.0	
11	✓					102.2
12	✓	559.0	✓		559.0	2238.8
13	✓					1643.8
14	✓	74.7	✓	74.7		1431.0
15	✓	1270.2	✓	69.0	1201.2	
16	✓					3743.2
17	✓	852.0	✓	82.2	769.8	
18	✓	976.7	✓	133.1	843.6	1099.9
19	✓					161.8
20	✓	311.0	✓		311.0	
21	✓	74.1	✓	55.0	19.1	24.0
21	8.0	259.5	✓	131.7	127.8	
		8.0	13242.6	872.5	12455.5	24517.8

Summary

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cu.Yds. Bank made from Cuts	cu.Yds. deducted for Shrinkage	Borrow Earth	cu.Yds. Loose Rock	cu.Yds. Hauled 100'	ft. B.M. Lumber in Culverts
50.5	50.5			910	
0.9	1620.9				
7.4	57.4				
3.1	4872.0		11.1	1140	
8.9	11.1		18.9	4210	
78.0	498.0			7610	
5.8	5.8				
1.8	4311.8				
5.6	2487.5		42.7	3290	
2.2	102.2				
8.8	1188.4		1050.4	1310	
3.8	247.4	1186.9	209.5	760	
1.0	285.7	171.8	973.5	480	
3.2	3017.7		725.5	1540	
9.9	1099.9			1680	
1.8	161.8			1260	
4.0		24.0		1920	
				210	
					14987
17.8	20018.1	1382.7	3031.6	27080	14987

✓ 9/27

SECTION 14. COST.

EXCAVATION, L. ROCK, 872.5 CU. YDS. @ \$ 0.32 = \$ 279.20

" , S. ROCK, 1245.5 " " @ 0.80 = 996.40

BORROW, L. ROCK, 303.6 " " @ 0.30 = 90.98

" , EARTH, 1382.7 " " @ 0.12 = 165.93

HAUL, 100 FT., 270.80 " " @ 0.015 = 4.0620

LUMBER, FT. B.M., 149.87 @ \$12.00 = 1798.5

SLOPE WALL, 8 " " @ \$2.00 = 16.00

TOTAL \$11921.06

T.

279.20

964.40

909.48

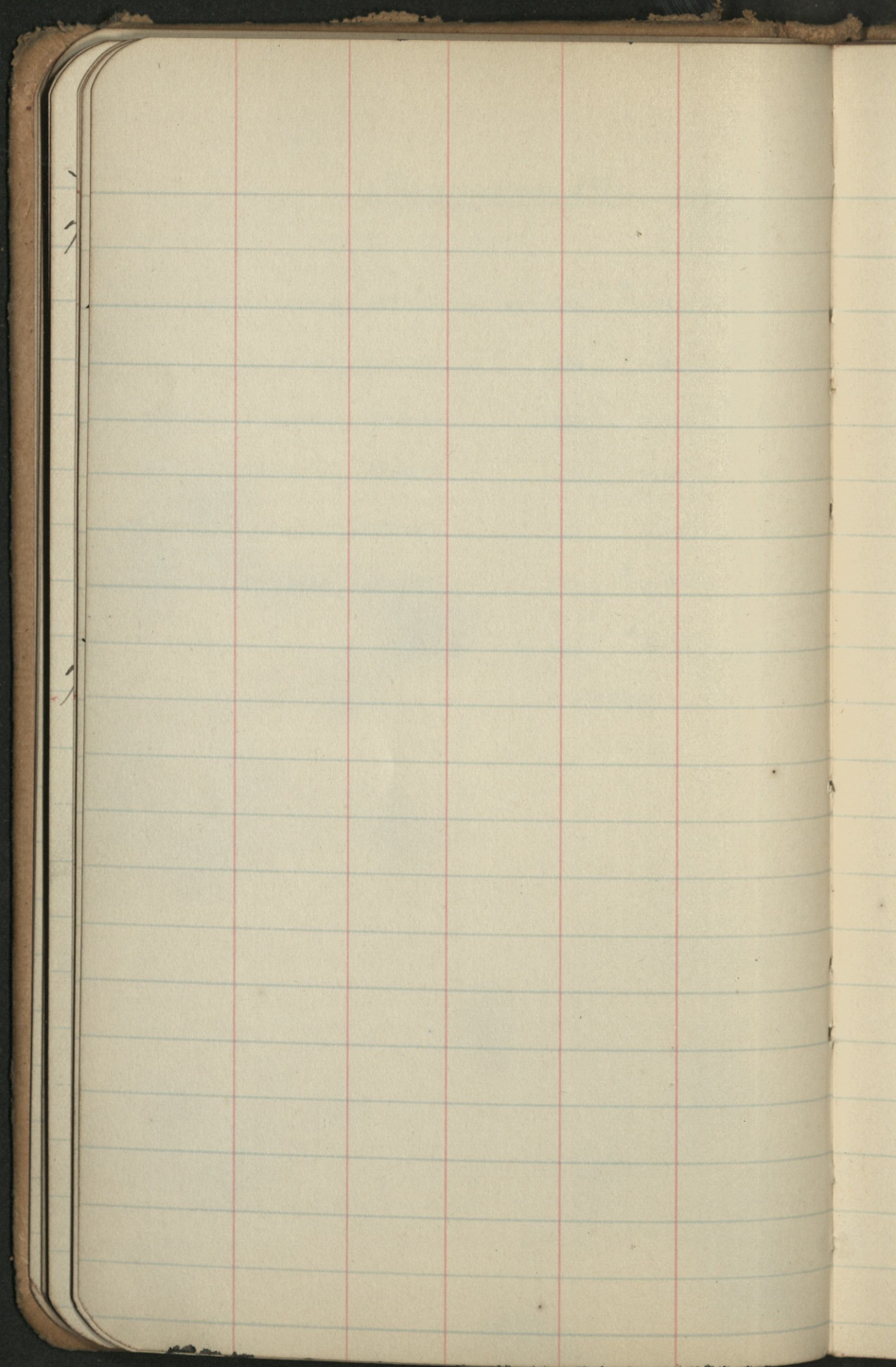
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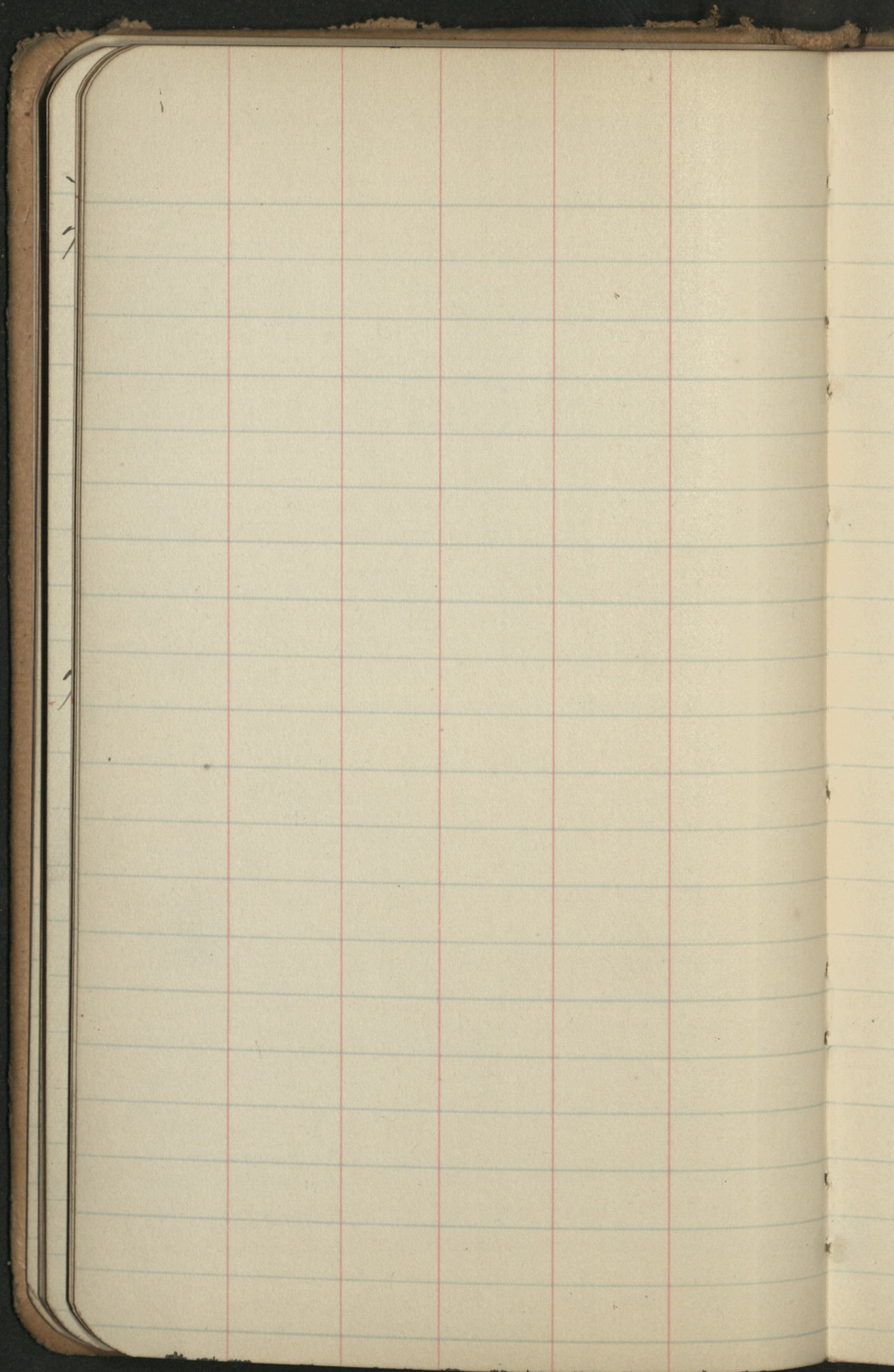
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16.00

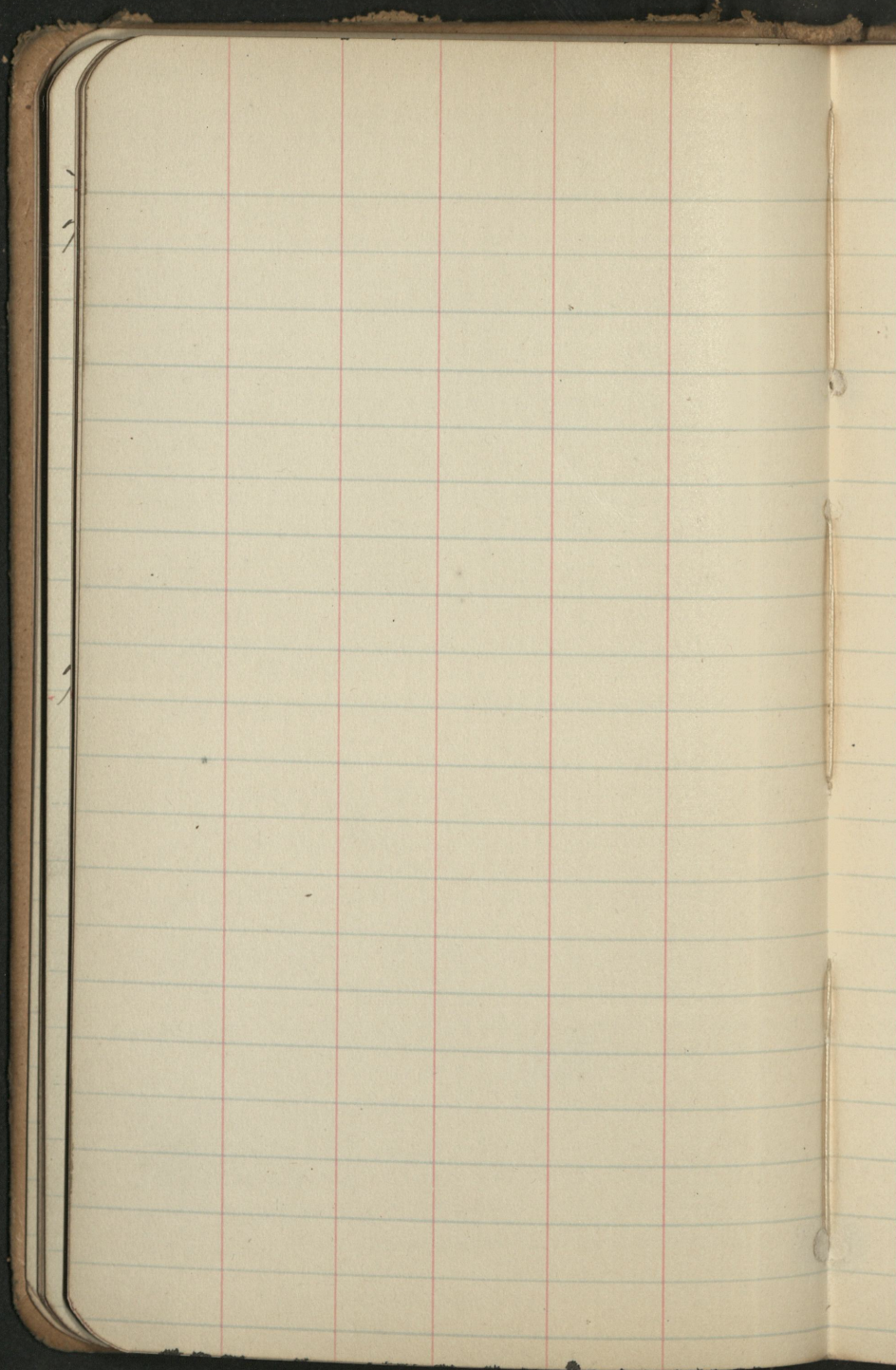
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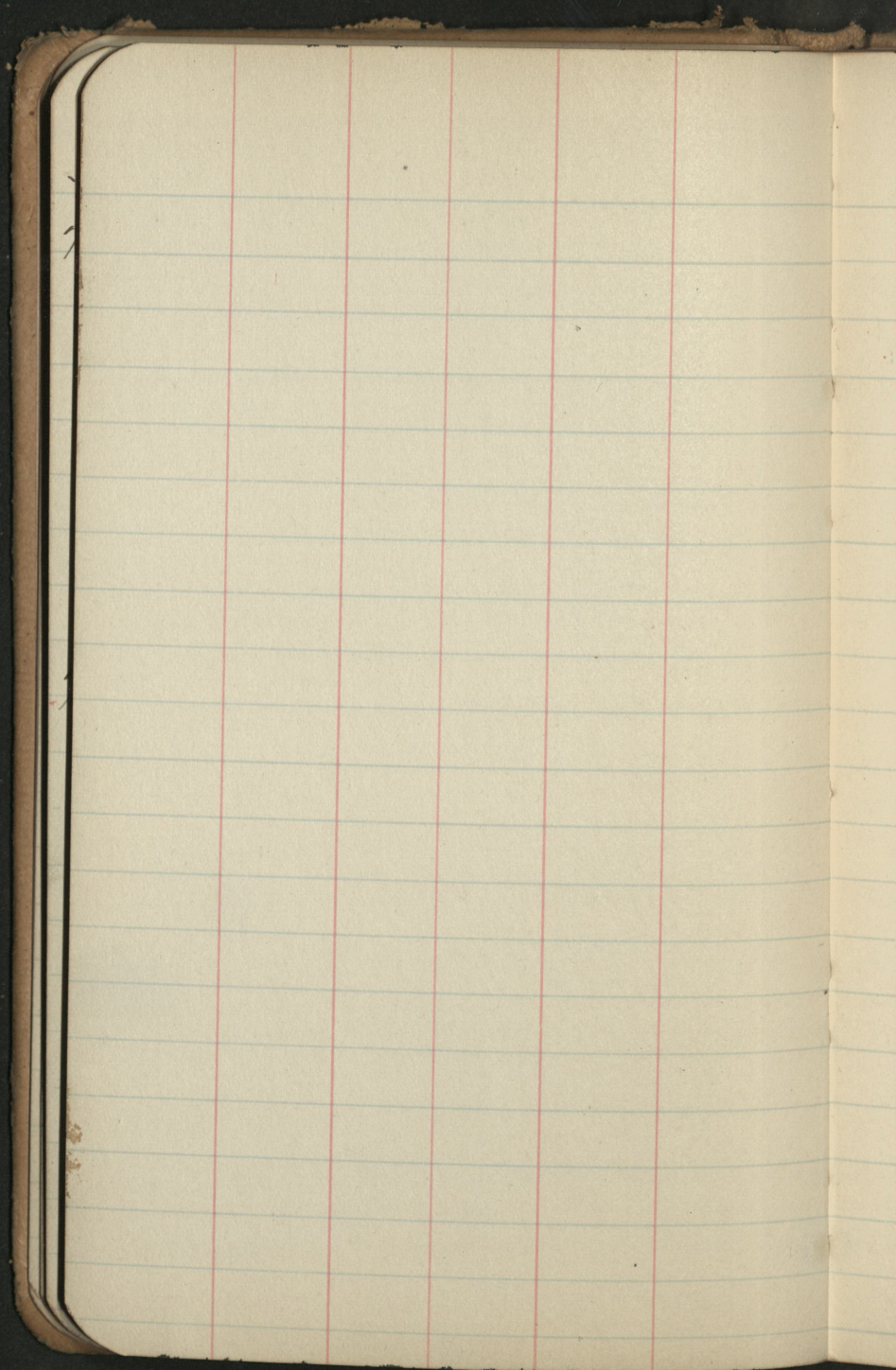


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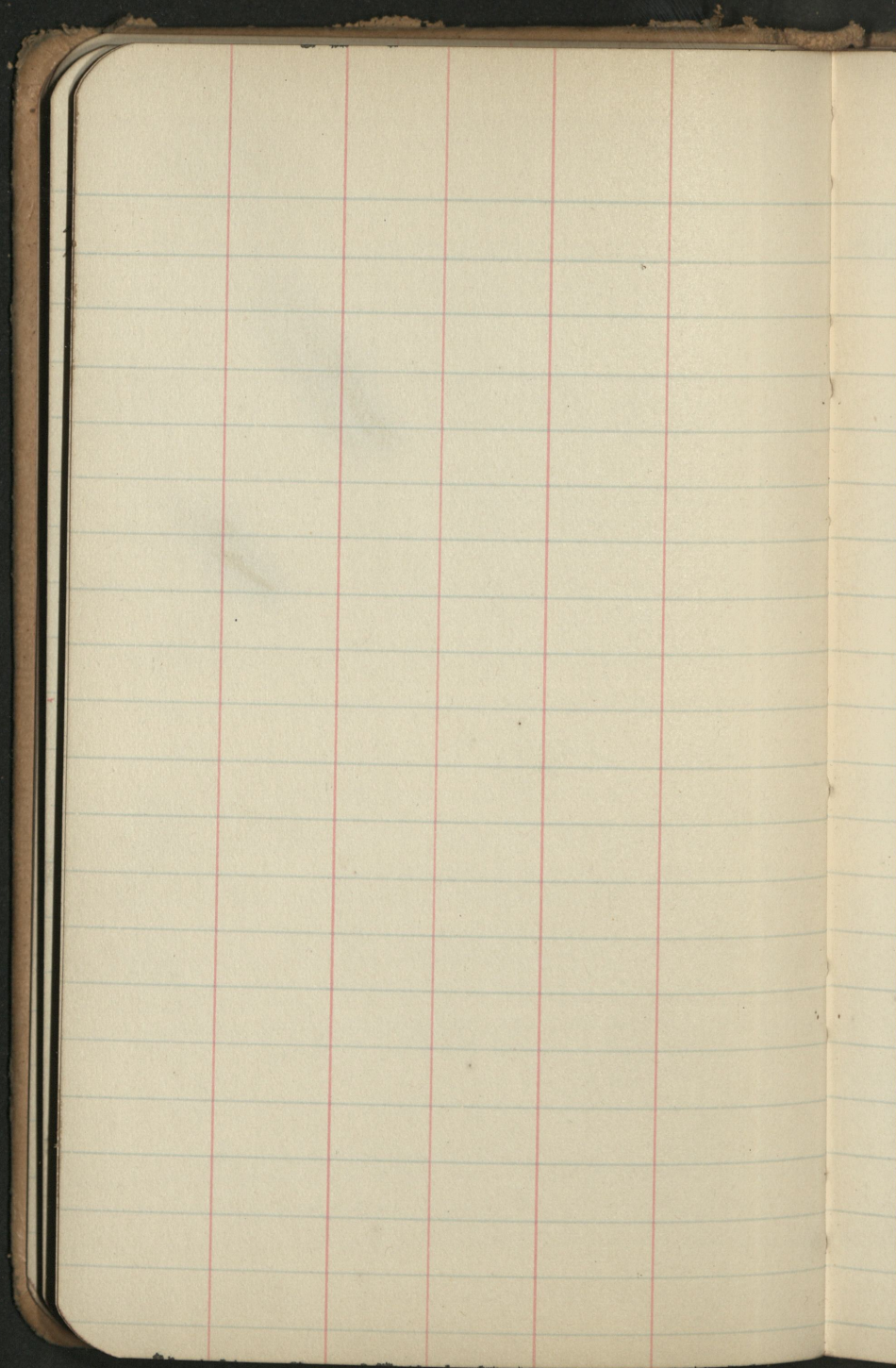


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Section 15

Stations	Grade	L	C	R
714	$\overset{+333}{-}$	$\begin{array}{r} +56 \\ 9.4 \end{array}$	$\begin{array}{r} +4.3 \end{array}$	$\begin{array}{r} +2.5 \\ 86 \end{array}$
+29	$\overset{3654.29}{\circ}$			
+45		$\begin{array}{r} +37 \\ 8.9 \end{array}$	$\begin{array}{r} +1.7 \end{array}$	$\begin{array}{r} 0.0 \\ 8.0 \end{array}$
+75		$\begin{array}{r} 0.0 \\ 8.0 \end{array}$	$\begin{array}{r} -0.9 \end{array}$	$\begin{array}{r} -2.9 \\ 11.4 \end{array}$
715		$\begin{array}{r} -3.3 \\ 12.0 \end{array}$	$\begin{array}{r} 5.4 \end{array}$	$\begin{array}{r} -6.5 \\ 16.8 \end{array}$
+35	$\overset{281}{-}$	$\begin{array}{r} -9.8 -14.2 \\ 21.7 \end{array}$	$\begin{array}{r} 14.0 \\ 15.4 \end{array}$	$\begin{array}{r} -20.6 \\ 37.9 \end{array}$
+50		$\begin{array}{r} -6.3 \\ 16.5 \end{array}$	$\begin{array}{r} 8.7 \end{array}$	$\begin{array}{r} -1.56 \\ 30.4 \end{array}$
716		$\begin{array}{r} -1.2 \\ 8.8 \end{array}$	$\begin{array}{r} -2.3 \end{array}$	$\begin{array}{r} -4.6 \\ 13.9 \end{array}$
+50		$\begin{array}{r} -0.7 \\ 8.1 \end{array}$	$\begin{array}{r} 2.0 \end{array}$	$\begin{array}{r} -6.3 \\ 16.5 \end{array}$
+80		$\begin{array}{r} -3.6 \\ 12.4 \end{array}$	$\begin{array}{r} 5.4 \end{array}$	$\begin{array}{r} -7.1 \\ 17.7 \end{array}$
+80.7	$\overset{3646.67}{\circ}$			
717+15	$\overset{-198}{-}$	$\begin{array}{r} -11.6 \\ 24.4 \end{array}$	$\begin{array}{r} 73.1 \end{array}$	$\begin{array}{r} -13.6 \\ 27.4 \end{array}$

Areas		Cub. Yds.		
Cut	Fill	Exc.	Emb.	
71.10				Sta 714 to 714 ⁷⁵ Exc. 112.24 <u>Solid Rock</u>
		83.6		Haul n. from
29.16	0.0			
		10.8	7.0	
00	18.88	94.4		
		17.8	112.59	
		112.2	60.6	
	112.06			Sta 714 to 714 ⁷⁵ Exc. 112.24 456.0 Emb 2053.1 C.Y.
	591.50			Made from Cuts
				242.2
	280.66			
			302.8	
	46.40			
			88.4	
	49.10			
			93.3	
	118.72			
			354.0	
	427.49			
			378.9	
			1983.2	

Station	Grade	L	C	R
717+50		$\frac{-3.3}{12.0}$	6.5	$\frac{10.0}{22.0}$
+70		$\frac{0.0}{8.0}$	0.9	$\frac{-2.5}{10.8}$
+95		$\frac{+4.0}{9.0}$	1.8	$\frac{0.0}{8.0}$
718+20		$\frac{+5.2}{9.3}$	1 3.0	$\frac{+12}{8.3}$
+70		$\frac{+10.9}{10.7}$	+9.8	$\frac{+9.4}{10.4}$
719	-1.98	$\frac{+5.5}{9.4}$	+6.1	$\frac{+6.9}{9.7}$
+20		$\frac{0.0}{8.0}$	+1.5	$\frac{+2.4}{8.6}$
+30		$\frac{-1.8}{9.7}$	7.0	$\frac{0.0}{8.0}$
+50		$\frac{-6.3}{16.5}$	8.6	$\frac{-7.3}{18.0}$
+65		$\frac{-2.0}{10.0}$	5.3	$\frac{-11.0}{16.0} \frac{-9.4}{21.1}$

Areas Cub. Yds.
Cut Fill Exc. Emb.

157.05

1983.7

646

0.0

17.21

9.7

5.3

2053.1

31.30

0.0

38.6

Sta 717+70 to 719+30 Exc. 582.0 cu.

52.00

Class Slip L_o Rock = 17.0 "

Slip 5.0

Balance Solid " = 565.0 "

219.1

Haul 87.7 So far

184.59

+ 410 from 18+70 to 17+20 = 620 haul

Slip 12.0

162.5

107.86

48.1

22.05

0.0

Sta 719+20 to 720+55

2.7

1.9 Emb 3360 cu.

0.0

15.15

497.7

84.3 59.

582.0

Made from Cut n

78.2

195.95

96.0

149.65

93.6

269.7

Stations Grade

L C R

719+85

$\frac{-0.5}{7.8}$ 3.4 $\frac{-12.6}{25.9}$

+95

$\frac{0.0}{8.0}$ 2.4 $\frac{-6.9}{17.4}$

720+20

$\frac{+7.0}{9.8}$ +2.0 $\frac{0.0}{3.0}$ $\frac{-2.2}{10.3}$

+45

$\frac{+3.6}{8.9}$ +0.9 $\frac{0.0}{3.0}$ $\frac{-6.7}{17.1}$

+55

$\frac{+3.7}{8.9}$ +2.3 $\frac{0.0}{8.0}$

+90

$\frac{+6.4}{9.6}$ +4.6 $\frac{+1.7}{8.4}$

721

$\frac{+6.3}{9.6}$ +3.2 $\frac{+1.0}{8.3}$

+35

$\frac{+10.6}{10.7}$ +6.4 $\frac{+2.7}{8.7}$

+50

$\frac{+12.0}{11.0}$ +8.5 $\frac{+6.4}{9.6}$

+65

$\frac{+12.1}{11.0}$ +10.7 $\frac{+6.3}{9.6}$

-1.98

Areas Cub. Yds.
 Cut Fill Exc. Emb.
 103.14 269.7 ✓

29.2

0.0 54.63

12.6 27.3

40.80 4.40

28.0 8.2

19.76 13.40

10.0 1.6

34.24 0.0

336.0 ✓

73.80

Slip 10.2
70.0

Sta 719+95 to 722+25 ✓

Exc 745.0 Cub. Yds. ✓

Class Slip L. Rock = 9.6 @ 4. ✓

S.

24.4 Balance Solid " = 653.4 " ✓

57.84

Haul 60.7 So far ✓

S. 21.5

" 180. from 721 to 19+55 = 260 ✓

112.2

1420 " 21+60+716 = 2350 ✓

115.28

Haul 2610. ✓

S.

14.2

76.8

161.15

S.

16.2

95.8

183.81

S.

21.1

124.4

643.0 ✓

✓ 444

Station	Grade	L	C	R
721	+95	$\begin{array}{r} +5.3 \\ 9.3 \end{array}$	$\begin{array}{r} +2.2 \\ 2.2 \end{array}$	$\begin{array}{r} 0.0 \\ 8.0 \end{array}$
722	+25	$\begin{array}{r} 0.0 \\ 8.0 \end{array}$	$\begin{array}{r} -2.0 \\ 2.0 \end{array}$	$\begin{array}{r} -5.8 \\ 15.7 \end{array}$
	+40	$\begin{array}{r} -5.1 \\ 14.7 \end{array}$	$\begin{array}{r} 7.3 \\ 7.3 \end{array}$	$\begin{array}{r} -9.0 \\ 20.5 \end{array}$
	+55	$\begin{array}{r} 0.0 \\ 8.0 \end{array}$	$\begin{array}{r} -3.5 \\ 3.5 \end{array}$	$\begin{array}{r} -17.7 \\ 33.6 \end{array}$
	+65	$\begin{array}{r} +2.3 \\ 8.6 \end{array}$	$\begin{array}{r} +0.5 \\ 0.5 \end{array}$	$\begin{array}{r} 0.0 \\ 8.0 \end{array}$
723		$\begin{array}{r} +15.3 \\ 14.8 \end{array}$	$\begin{array}{r} +13.0 \\ 13.0 \end{array}$	$\begin{array}{r} +10.9 \\ 10.7 \end{array}$
	+30	$\begin{array}{r} +16.6 \\ 12.2 \end{array}$	$\begin{array}{r} +15.0 \\ 15.0 \end{array}$	$\begin{array}{r} +13.5 \\ 11.4 \end{array}$
	+50	$\begin{array}{r} +14.0 \\ 11.5 \end{array}$	$\begin{array}{r} +13.1 \\ 13.1 \end{array}$	$\begin{array}{r} +12.6 \\ 11.2 \end{array}$
724	+05	$\begin{array}{r} +2.2 \\ 8.6 \end{array}$	$\begin{array}{r} 0.0 \\ 0.0 \end{array}$	$\begin{array}{r} 0.0 \\ 8.0 \end{array}$
	+10	$\begin{array}{r} 0.0 \\ 8.0 \end{array}$	$\begin{array}{r} -1.5 \\ 1.5 \end{array}$	$\begin{array}{r} -1.5 \\ 9.3 \end{array}$

-198

Areas Cub. Yds.
Cut Fill Exc Emb

40.23 0.0

643.0

2.8
14.9

16.3 Sta 721+95 to 722+65

0.0 44.00

660.7

843.3

Emb 181.3 @ 4.

745.0

61.6 Made from Cut. 2

17783

86.8

0.0 134.75

1.6

16.6

181.3

13.35

0.0

5. 23.3

171.4 Sta 722+55 to 724+10.4. 1254.1 @ 4.

251.05

Class Slips L. Rock = 237.1 @ 4.

5. 90.3

Balance Solids = 1017.0

304.7

297.40

Haul 197. So. from

5. 77.1

204.6 " 256.7 N. "

" 303 from 23+10% 15+35 = 2348

255.09

" 202 " 23+30% 4+70 = 3757

5. 46.4

" 230 " 23+45% 24+65 = 275

268.8

Haul 638.0

8.80

0.0

0.5

1.1

0.0

18.23

1188.7

65.4 = 345.0

1254.1

65.4

66.5

Stations Grade

L

C

R

724+25

$\begin{array}{r} -3.6 \\ 12.4 \end{array}$ 8.7 $\begin{array}{r} -11.7 \\ 13.0 \end{array}$ $\begin{array}{r} -9.2 \\ 20.8 \end{array}$

140

$\begin{array}{r} -4.1 \\ 13.2 \end{array}$ 9.1 $\begin{array}{r} -14.2 \\ 20.0 \end{array}$ $\begin{array}{r} -12.5 \\ 20.8 \end{array}$

+60

$\begin{array}{r} -8.0 \\ 19.0 \end{array}$ 72.4 $\begin{array}{r} -13.8 \\ 16.0 \end{array}$ $\begin{array}{r} -18.3 \\ 34.5 \end{array}$

+85

$\begin{array}{r} -6.1 \\ 16.2 \end{array}$ 11.8 $\begin{array}{r} -21.5 \\ 39.3 \end{array}$

725

$\begin{array}{r} -6.6 \\ 16.9 \end{array}$ 9.5 $\begin{array}{r} -17.2 \\ 32.8 \end{array}$

+50

$\begin{array}{r} -2.9 \\ 11.4 \end{array}$ 4.9 $\begin{array}{r} -12.0 \\ 25.0 \end{array}$

726+05

$\begin{array}{r} -5.1 \\ 14.7 \end{array}$ 9.0 $\begin{array}{r} -16.7 \\ 32.1 \end{array}$

+30

$\begin{array}{r} -3.4 \\ 12.1 \end{array}$ 7.1 $\begin{array}{r} -12.5 \\ 20.8 \end{array}$

+60

$\begin{array}{r} -6.7 \\ 17.1 \end{array}$ 11.5 $\begin{array}{r} -15.3 \\ 30.3 \end{array}$

727+05

$\begin{array}{r} 0.0 \\ 8.0 \end{array}$ 3.2 $\begin{array}{r} -12.3 \\ 20.5 \end{array}$

-19.8

Areas		Cub. Yds.	
Cut	Fill	Exc	Emb.
	217.17		66.5
			Sta 724+05 to 728+05
		134.6	Emb'd 2991.6 cu.
	267.34		Made from Cuts
		247.4	
	400.70		
		381.8	
	424.05		
		206.5	
	319.37		
		426.6	
	141.33		
		436.2	
	286.90		
		220.8	
	190.19		
		300.1	
	350.25		
		372.4	
0.0	96.65		
0.0	0.0	67.7	
		2860.2	

Stations Grade

	L	C	R
727+30	$\begin{array}{r} +1.4 \\ 8.4 \end{array} \begin{array}{r} 0.0 \\ 5.0 \end{array}$	7.5	$\begin{array}{r} -8.8 \\ 20.2 \end{array}$
+40	$\begin{array}{r} 0.0 \\ 8.0 \end{array}$	2.5	$\begin{array}{r} -5.0 \\ 14.5 \end{array}$
+45	$\begin{array}{r} -1.3 \\ 9.0 \end{array}$	3.4	$\begin{array}{r} -6.6 \\ 16.9 \end{array}$
+55	$\begin{array}{r} 0.0 \\ 8.0 \end{array}$	3.6	$\begin{array}{r} -17.6 \\ 33.4 \end{array}$
+80	$\begin{array}{r} +5.9 \\ 9.5 \end{array}$	$\begin{array}{r} 3.1 \\ 5.5 \end{array}$	$\begin{array}{r} -1.8 \\ 9.7 \end{array}$
728+05	$\begin{array}{r} +7.9 \\ 10.0 \end{array}$	$\begin{array}{r} 3.8 \\ 3.8 \end{array}$	$\begin{array}{r} 0.0 \\ 8.0 \end{array}$
+25	$\begin{array}{r} +10.8 \\ 10.7 \end{array}$	$\begin{array}{r} + \\ 6.2 \end{array}$	$\begin{array}{r} +3.3 +1.2 \\ 7.0 8.3 \end{array}$
+50	$\begin{array}{r} +8.9 \\ 10.2 \end{array}$	$\begin{array}{r} +5.6 \\ 5.6 \end{array}$	$\begin{array}{r} +2.8 \\ 8.7 \end{array}$
+70	$\begin{array}{r} +14.3 \\ 11.6 \end{array}$	$\begin{array}{r} + \\ 10.4 \end{array}$	$\begin{array}{r} +6.9 \\ 9.7 \end{array}$
729	$\begin{array}{r} +15.4 \\ 11.9 \end{array}$	$\begin{array}{r} +1.5 \\ 1.5 \end{array}$	$\begin{array}{r} +8.1 \\ 10.1 \end{array}$

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Areas		Cub Yds.	
Cut	Fill	Exc	Emb
210	4970	0.7	2860.6
			Sta 727+05 to 727+40
		0.3	17.7
		1.0	
0.0	4562	2.0	56.
		3.0	
	7168		108
			38.5
0.0	13612		
		14.4	63.6
4685	135		
		52.1	0.4
6580	0.0		2991.6
11237		66.0	Sta 727+55 to 730+05 Exc 1033.0 Cy.
			class Slip L. Rock = 47.0 Cy.
			Balance Solid " = 986.0 "
9972		98.2	Haul 1228 80 per
			" 850 from 28+65 to 26+40 = 1910
		109.4	
19556			
		Slip 10.0	
		231.1	
22050			
		S. 37.0	
		2429	
		862.1	

Station	Grade	L	C	R
729	+35	$\begin{array}{r} +12.8 \\ 11.2 \end{array}$	$\begin{array}{r} +8.7 \\ 8.7 \end{array}$	$\begin{array}{r} +3.8 \\ 9.0 \end{array}$
	+68	$\begin{array}{r} +3.1 \\ 8.8 \end{array}$	$\begin{array}{r} +1.1 \\ 1.1 \end{array}$	$\begin{array}{r} 0.0 \\ 8.0 \end{array}$
	+95	$\begin{array}{r} 0.0 \\ 8.0 \end{array}$	$\begin{array}{r} -2.1 \\ 2.1 \end{array}$	$\begin{array}{r} -2.0 \\ 10.0 \end{array}$
	+95	$\begin{array}{r} +2.1 \\ 8.5 \end{array}$	$\begin{array}{r} 0.0 \\ 4.5 \end{array} \begin{array}{r} 2.1 \\ 2.1 \end{array}$	$\begin{array}{r} -10.6 \\ 22.9 \end{array}$
730	362092			
730	+05	$\begin{array}{r} 0.0 \\ 8.0 \end{array}$	$\begin{array}{r} -3.3 \\ 3.3 \end{array}$	$\begin{array}{r} -12.0 \\ 25.0 \end{array}$
	+10	$\begin{array}{r} -0.8 \\ 8.2 \end{array}$	$\begin{array}{r} -3.6 \\ 3.6 \end{array}$	$\begin{array}{r} -12.4 \\ 25.6 \end{array}$
	+15	$\begin{array}{r} 0.0 \\ 8.0 \end{array}$	$\begin{array}{r} -1.1 \\ 1.1 \end{array}$	$\begin{array}{r} -7.2 \\ 17.8 \end{array}$
	+35	$\begin{array}{r} +6.5 \\ 9.6 \end{array}$	$\begin{array}{r} +3.2 \\ 3.2 \end{array}$	$\begin{array}{r} 0.0 \\ 8.0 \end{array}$
	+50	$\begin{array}{r} +8.2 \\ 10.1 \end{array}$	$\begin{array}{r} +5.5 \\ 5.5 \end{array}$	$\begin{array}{r} +2.5 \\ 8.6 \end{array}$
731		$\begin{array}{r} +14.3 \\ 11.6 \end{array}$	$\begin{array}{r} +1.3 \\ 1.3 \end{array}$	$\begin{array}{r} +7.8 \\ 10.0 \end{array}$

Areas		Cub. Yds.	
Cut	Fill	Exc	Emb
154.27		86.21	✓
		107.5	
21.64	0.0	1.8	2.2
			Sta 729+68 to 730+35 ✓
0.0	25.90		Emb 108.4 C.H. ✓
		0.9	134.0
			Made from Cut north.
3.68	65.88		
		0.5	30.1
0.0	96.45	972.8	
		60.2 = 1/2 54.	
		1033.0	✓
			18.8
	107.04		
			13.6
0.0	39.39		
		13.4	9.7
54.16	0.0		108.4 ✓
		41.2	
94.22			
		282.1	
210.44			
		Slip 23.7	
		222.7	✓
		583.1	✓

✓ 94.4

Stations Grade

L

C

R

731+25

$\frac{+17.5}{12.4}$

$\frac{+13.6}{10.7}$

$\frac{+10.9}{10.7}$

+50

$\frac{+16.3}{12.1}$

$\frac{+13.7}{10.9}$

$\frac{+11.4}{10.9}$

732

$\frac{+7.9}{10.0}$

$\frac{+3.8}{8.3}$

$\frac{+1.2}{8.3}$

+25

$\frac{+6.1}{9.5}$

$\frac{+2.7}{8.0}$

$\frac{0.0}{8.0}$

+65

$\frac{0.0}{8.0}$

$\frac{-2.3}{18.0}$

$\frac{-7.3}{18.0}$

+85

$\frac{-3.8}{12.7}$

$\frac{-5.4}{21.4}$

$\frac{-9.6}{21.4}$

733+30

$\frac{-13.4}{27.1}$

$\frac{-16.6}{36.3}$

$\frac{-19.5}{36.3}$

+50

$\frac{-11.2}{23.8}$

$\frac{-14.4}{39.9}$

$\frac{-21.9}{39.9}$

+85

$\frac{-10.8}{23.2}$

$\frac{-13.1}{35.7}$

$\frac{-19.1}{35.7}$

734+15

$\frac{-16.7}{32.1}$

$\frac{-17.7}{46.9}$

$\frac{-26.6}{46.9}$

-169

Areas	Cub. Yds
Cut	Fill
270.68	Exc. Emb. 583.1 Sta 730+15 to 732+65 Exp. 1415.0 @ 4. S. 37.5 Class Slip L _o Rock = 105.6 " 249.5 Balance Solid " = 1309.4 "
268.35	Haul 77 yds L _o free S. 44.4 " 198 " N. " 314.4 " 678 from 31+05 to 25+70 = 3627 " 410 + 31+60 to 33+25 = 673 Haul 4300
71.17	110.4
4802	00
0.0	55.45 23.7 27.4 1363.0 52.0 = 0.456 1415.0
13897	72.0 Sta 732+25 to 735+80 Emb'dt 4964.2 @ 4. 650.3 Made from Cuts 641.37 450.3 5744.9 6902 490.45 745.1 850.70 551.6 3186.9

Stations Grade

	L	C	R
734+35	$\begin{array}{r} -11.4 \\ 24.1 \end{array}$	-15.8	$\begin{array}{r} -23.0 \\ 41.5 \end{array}$
+50	$\begin{array}{r} -10.2 \\ 22.3 \end{array}$	$\begin{array}{r} - \\ 14.7 \end{array}$	$\begin{array}{r} -18.2 \\ 12.0 \\ -15.9 \\ 30.9 \end{array}$
735	$\begin{array}{r} -9.2 \\ 20.8 \end{array}$	76.2	$\begin{array}{r} -16.8 \\ 7.5 \\ -9.1 \\ 20.7 \end{array}$
+20	$\begin{array}{r} -11.1 \\ 23.7 \end{array}$	$\begin{array}{r} - \\ 9.5 \end{array}$	$\begin{array}{r} -11.9 \\ 12.0 \\ 8.9 \\ 20.4 \end{array}$
+55	$\begin{array}{r} -2.7 \\ 11.1 \end{array}$	$\begin{array}{r} - \\ 5.0 \end{array}$	$\begin{array}{r} -3.4 \\ 12.1 \end{array}$
+80	$\begin{array}{r} 0.0 \\ 8.0 \end{array}$	0.0	$\begin{array}{r} 0.0 \\ 8.0 \end{array}$
736+15	$\begin{array}{r} +3.9 \\ 9.0 \end{array}$	$\begin{array}{r} + \\ 2.8 \end{array}$	$\begin{array}{r} +4.2 \\ 9.1 \end{array}$
+40	$\begin{array}{r} +9.9 \\ 10.5 \end{array}$	$\begin{array}{r} + \\ 7.6 \end{array}$	$\begin{array}{r} +8.0 \\ 10.0 \end{array}$
+75	$\begin{array}{r} +20.5 \\ 13.1 \end{array}$	$\begin{array}{r} + \\ 18.2 \end{array}$	$\begin{array}{r} +17.3 \\ 12.3 \end{array}$
737	$\begin{array}{r} +26.4 \\ 14.6 \end{array}$	$\begin{array}{r} + \\ 23.4 \end{array}$	$\begin{array}{r} +24.4 \\ 14.0 \end{array}$

3609.10

Areas Cub. Yds.
Cut Fill Exc. Emb.

635

63864

3186.9 ✓

324.4

529.24

891.0

43303

274.3

307.56

250.9

79.35

00

36.7

00

0.0

4964.2 ✓

37.3

57.74

S. 10.8
95.9

149.50

S. 66.4
344.7

38234

S. 61.3
426.0

537.82

S. 475.2
1236.3

2753.9 ✓

✓ 1000

Stations Grade

	L	C	R
737+50	$\begin{array}{r} +34.1 \\ 16.5 \end{array}$	$\begin{array}{r} +32.6 \end{array}$	$\begin{array}{r} +32.4 \\ 16.1 \end{array}$

738	$\begin{array}{r} +28.8 \\ 15.2 \end{array}$	$\begin{array}{r} +28.1 \end{array}$	$\begin{array}{r} +27.3 \\ 14.8 \end{array}$
-----	--	--------------------------------------	--

+50	$\begin{array}{r} +23.8 \\ 14.0 \end{array}$	$\begin{array}{r} +21.9 \end{array}$	$\begin{array}{r} +19.6 \\ 12.9 \end{array}$
-----	--	--------------------------------------	--

739	$\begin{array}{r} +16.9 \\ 12.2 \end{array}$	$\begin{array}{r} +16.5 \end{array}$	$\begin{array}{r} +14.0 \\ 11.5 \end{array}$
-----	--	--------------------------------------	--

+40	$\begin{array}{r} +11.3 \\ 10.8 \end{array}$	$\begin{array}{r} +9.2 \end{array}$	$\begin{array}{r} +4.9 \\ 9.2 \end{array}$
-----	--	-------------------------------------	--

+80	$\begin{array}{r} +8.2 \\ 10.1 \end{array}$	$\begin{array}{r} +4.4 \end{array}$	$\begin{array}{r} +2.0 \\ 8.5 \end{array}$
-----	---	-------------------------------------	--

740	$\begin{array}{r} +2.4 \\ 8.6 \end{array}$	$\begin{array}{r} +1.5 \end{array}$	$\begin{array}{r} 0.0 \\ 8.0 \end{array}$
-----	--	-------------------------------------	---

+10	$\begin{array}{r} +0.5 \\ 8.1 \end{array}$	$\begin{array}{r} 0.0 \\ 3.0 \end{array}$	$\begin{array}{r} -1.8 \\ 9.7 \end{array}$
-----	--	---	--

+15	$\begin{array}{r} +2.0 \\ 8.5 \end{array}$	$\begin{array}{r} +1.0 \end{array}$	$\begin{array}{r} 0.0 \\ 8.0 \end{array}$
-----	--	-------------------------------------	---

+30	$\begin{array}{r} +5.4 \\ 9.4 \end{array}$	$\begin{array}{r} +3.7 \end{array}$	$\begin{array}{r} +1.9 \\ 8.5 \end{array}$
-----	--	-------------------------------------	--

- 330

Areas
Cut FillCub Yds.
Exc. Emb.

797.38

2953.9
Sta 735+80 to 741+20 $\frac{1}{2}$ c 8133.5 cu y.

S. 644.8

1336.3 Class Slips Loose Rock = 1754.1

645.90

Balance Solid " = 6379.4

S. 351.2

1031.5 Haul 133 yds So far

468.16

" 88 " N "

S. 97.9

" 3100 from 37+20 to 34+20 = 9300

729.0

" 2500 " 38+70 to 42+70 = 10000

319.13

Haul 19300

S. 32.8

352.6

156.80

S. 13.7

176.7

81.72

38.4

22.05

0.0

4.3

1.1

1.25

8.84

1.6

0.5

16.25

0.0

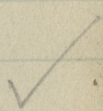
1.6

21.8

62.32

65.6

7652.1



✓ 22.05

Stations Grade

L C R

740+55 660-60

+6.3
9.6 +4.7 +2.8
8.7

+80

+3.3
8.8 4.1 0.0
8.0

741+20

0.0
8.0 3.0 -9.1
20.7

+40

-2.0
10.0 4.9 -9.3
21.0

+90

-6.5
16.8 7.4 -8.6
19.9

742+45

11.8
24.7 14.5 -14.0
28.0

+60

-17.5
33.3 19.6 -19.8 -17.1
32.7

+85

-10.2
22.3 12.3 -23.4
42.1

743+25

-3.0
11.5 3.9 -7.6
18.4

+50 358+35

-2.8
11.2 3.3 -4.0
13.0

Areas Cub Yds.
Cut Fill Exc. Emb.

79.41

765.21

49.1

22.44

0.0

11.1

37.0

0.0

74.90

7710.3

423.2 ✓ 59.

8133.5 ✓

Sta 740+80 to 743+91

70.5 Emb't 2733.4 @ 4.

115.50

made from Cut No

281.6

1886.4

673.2 ✓

472.38

353.8

801.17

608.7

513.66

451.2

95.41

73.7

63.73

116.6

2666.3 ✓

✓
2666.3

Station Grade

L

C

R

743+75 H.B.

$\frac{-7.7}{18.6}$ $\frac{-7.2}{7.0}$ $\frac{-7.2}{7.2}$ $\frac{-7.7}{7.0}$ $\frac{-7.6}{18.4}$

743+91 Toe

$\frac{12.3}{18.5}$ $\frac{-11.8}{7.0}$ $\frac{10.6}{7.0}$ $\frac{-11.7}{7.0}$ $\frac{10.5}{6.2}$

744+63 Toe

$\frac{6.8}{10.2}$ $\frac{10.9}{7.0}$ $\frac{11.1}{7.0}$ $\frac{10.5}{7.0}$ $\frac{2.8}{32.1}$

744+80 H.B.

$\frac{-4.8}{14.2}$ $\frac{-4.7}{7.0}$ $\frac{5.2}{7.0}$ $\frac{-5.4}{7.0}$ $\frac{-15.2}{29.8}$

+90

$\frac{-2.5}{10.8}$ $\frac{3.2}{7.0}$ $\frac{-16.0}{31.0}$

745+20

$\frac{0.0}{8.0}$ $\frac{2.3}{7.0}$ $\frac{-8.7}{20.1}$

+50

$\frac{0.0}{8.0}$ $\frac{2.0}{7.0}$ $\frac{-6.0}{16.0}$

746

$\frac{+2.2}{8.6}$ $\frac{0.0}{7.0}$ $\frac{-2.1}{10.2}$

+40

$\frac{+3.4}{8.9}$ $\frac{1.5}{7.0}$ $\frac{0.0}{8.0}$

+50

$\frac{+5.0}{9.3}$ $\frac{1.2}{7.0}$ $\frac{+0.9}{8.2}$

-267

Areas Cub. Yds.
Cut Fill Exc. Emb.

188.20

266.3 ✓

67.1

2733.4 ✓

47.3

150.23

Sta 744 + 63 to 746 + 40

52.2 Emb 319.4 Cu.

131.63

Made from Cut

108.0

62.77

59.8

0.0 4500

54 48.5

8.80 7.35

26.0 3.6

26.28 0.0

319.4 ✓

14.4

57.60

13.9

59.7 ✓

✓

Stations	Grade	L	C	R
746	+60	$\begin{array}{r} +2.8 \\ 8.7 \end{array}$	$\begin{array}{r} +1.5 \\ 1.5 \end{array}$	$\begin{array}{r} 0.0 \\ 8.0 \end{array}$
	+85	$\begin{array}{r} +5.8 \\ 9.5 \end{array}$	$\begin{array}{r} +3.1 \\ 3.1 \end{array}$	$\begin{array}{r} +3.2 \\ 8.8 \end{array}$
747	357801			
747	+20	$\begin{array}{r} +6.0 \\ 9.5 \end{array}$	$\begin{array}{r} +4.3 \\ 4.3 \end{array}$	$\begin{array}{r} +3.8 \\ 9.0 \end{array}$
	+30	$\begin{array}{r} +4.4 \\ 9.1 \end{array}$	$\begin{array}{r} +2.7 \\ 2.7 \end{array}$	$\begin{array}{r} +1.6 \\ 8.4 \end{array}$
	+55	$\begin{array}{r} +8.0 \\ 10.0 \end{array}$	$\begin{array}{r} +6.3 \\ 6.3 \end{array}$	$\begin{array}{r} +3.9 \\ 9.0 \end{array}$
	+75	$\begin{array}{r} +7.3 \\ 9.8 \end{array}$	$\begin{array}{r} +3.7 \\ 3.7 \end{array}$	$\begin{array}{r} +1.6 \\ 8.4 \end{array}$
748	278	$\begin{array}{r} +13.0 \\ 11.3 \end{array}$	$\begin{array}{r} +11.5 \\ 11.5 \end{array}$	$\begin{array}{r} +10.5 \\ 10.6 \end{array}$
	+45	$\begin{array}{r} +19.1 \\ 12.8 \end{array}$	$\begin{array}{r} +17.2 \\ 17.2 \end{array}$	$\begin{array}{r} +16.2 \\ 12.1 \end{array}$
	+75	$\begin{array}{r} +16.8 \\ 12.2 \end{array}$	$\begin{array}{r} +14.9 \\ 14.9 \end{array}$	$\begin{array}{r} +14.0 \\ 11.5 \end{array}$
749		$\begin{array}{r} +12.0 \\ 11.1 \end{array}$	$\begin{array}{r} +11.8 \\ 11.8 \end{array}$	$\begin{array}{r} +11.0 \\ 10.8 \end{array}$

Areas	Cub Yds.
Cut Fill	Exc Emb.
23.72	59.7 Sta 745 + 50% 750 + 15 Exc 1989.7 Cu Yds.
82.67	49.3 Class Slips L Rock = 100.7 C.Y. Balance Solid " = 1889.0 "
78.98	104.8 Haul 131. Yds So far " 42 " N. " " 240 from 47 + 35 to 45 + 05 = 550 " 10304 48 + 90 to 51 + 45 = 2830 23.4 487.5 waste Haul 3380.
47.62	71.8
107.45	slip 12.5 65.5
69.27	133.9
219.92	s 6.0 479.4
355.34	s 28.8 363.9
299.76	s 21.3 241.9
222.81	s 32.1 192.9 1887.2

✓
222.81

Station Grade

L

C

R

749+35

+5.5

+3.7

+4.6

9.4

9.2

+50

+2.8

+0.4

+1.4

8.4

8.4

+55

+2.7

0.0

0.0

8.7

8.0

+70

+2.4

+0.6

0.0

-3.5

8.6

2.0

12.3

750

-2.78

+0.3

0.0

1.2

-2.8

8.1

6.0

11.2

+15

0.0

1.9

-5.0

8.0

14.5

+50

-3.8

5.6

-6.9

12.4

17.4

+75

-6.6

10.4

-13.7

16.9

27.6

751

-3.2

5.8

-9.0

11.8

20.5

+20

-2.8

4.1

-5.9

11.2

15.9

Areas		Cub. Yds.
Cut	Fill	Exc. Emb.

74.81

26.4

20.22

2.9

10.80

0.0

6.6

1.6

12.78

8.75

Sta 74955 to 75250

7.3

16.0 Emb'd 1405.1 Cy.

0.30

20.12

Made from Cut So.

0.1

16.4

0.0

38.87

1930.5

59.250.74550
76747

1989.7

104.1

124.73

196.3

302.45

203.2

136.37

82.3

86.00

135.9

755.8

✓
998

Stations. Grade

	L	C	R
757+50	$\frac{5.2}{14.8}$	6.7	$\frac{7.9}{18.9}$

+67.8 3564.99

+85 282	$\frac{9.2}{20.8}$	10.3	$\frac{14.1}{28.2}$
--	--------------------	------	---------------------

752+23.3 3563.41

752+25	$\frac{2.5}{10.8}$	3.6	$\frac{5.3}{15.0}$
--------	--------------------	-----	--------------------

+40	$\frac{0.0}{8.0}$	7.2	$\frac{2.3}{10.5}$
-----	-------------------	-----	--------------------

+50	$\frac{1.7}{8.4}$	0.5	$\frac{0.0}{8.0}$
-----	-------------------	-----	-------------------

+80	$\frac{16.4}{9.6}$	6.3	$\frac{15.0}{9.3}$
-----	--------------------	-----	--------------------

753	$\frac{10.8}{10.7}$	9.4	$\frac{7.4}{9.9}$
-----	---------------------	-----	-------------------

+35	$\frac{11.1}{10.8}$	10.1	$\frac{8.1}{10.0}$
-----	---------------------	------	--------------------

+55	$\frac{8.8}{10.2}$	5.5	$\frac{4.3}{9.1}$
-----	--------------------	-----	-------------------

+75	$\frac{1.5}{8.4}$	1.1	$\frac{0.0}{8.0}$
-----	-------------------	-----	-------------------

Areas		Cub. Yds	
Cut	Fill	Exc	Emb
			758.8 ✓

158.74

319.3

333.90

301.9

7374

25.8

0.0

1915

1.3

2.3

10.90

0.0

1405.1 ✓

64.5 Sta 75+24 to 75+25 Lx 59.46 cu. ✓

105.13

Solid Rock

101.8 Haul 52.3 n. from

" 500 from 53+20 to 54+50 = 650. ✓

169.62

227.8

181.84

106.4

105.47

44.6

150.2

0.0

3.1

2.4 ✓

549.5 ✓

✓ 947.1

Stations	Grade	L	C	R
753+85		$\begin{array}{r} +1.2 \\ 8.3 \end{array}$	$\begin{array}{r} 0.0 \\ 3.0 \end{array}$	$\begin{array}{r} -1.6 \\ 9.4 \end{array}$
754		$\begin{array}{r} +1.7 \\ 8.4 \end{array}$	$\begin{array}{r} 0.0 \\ 3.5 \end{array}$	$\begin{array}{r} -4.4 \\ 13.6 \end{array}$
+25		$\begin{array}{r} 0.0 \\ 8.0 \end{array}$	$\begin{array}{r} - \\ 2.2 \end{array}$	$\begin{array}{r} -2.8 \\ 11.2 \end{array}$
+45		$\begin{array}{r} =0.3 \\ 7.5 \end{array}$	$\begin{array}{r} -2.6 \end{array}$	$\begin{array}{r} -12.3 \\ 25.5 \end{array}$
+70	$\begin{array}{r} 25 \\ 31.6 \end{array}$	$\begin{array}{r} -6.3 \\ 16.5 \end{array}$	$\begin{array}{r} 8.4 \end{array}$	$\begin{array}{r} -15.5 \\ 30.3 \end{array}$
+90	$\begin{array}{r} - \\ 1 \end{array}$	$\begin{array}{r} -10.6 \\ 22.9 \end{array}$	$\begin{array}{r} -17.4 \end{array}$	$\begin{array}{r} -23.2 \\ 41.8 \end{array}$
755+20		$\begin{array}{r} -6.2 \\ 16.3 \end{array}$	$\begin{array}{r} - \\ 8.1 \end{array}$	$\begin{array}{r} -13.2 \\ 26.8 \end{array}$
+60		$\begin{array}{r} 0.0 \\ 8.0 \end{array}$	$\begin{array}{r} 7.9 \end{array}$	$\begin{array}{r} 25.6 \\ 15.4 \end{array}$
+85		$\begin{array}{r} 25.6 \\ 9.4 \end{array}$	$\begin{array}{r} + \\ 2.7 \end{array}$	$\begin{array}{r} 0.0 \\ 8.0 \end{array}$
+95		$\begin{array}{r} +7.2 \\ 9.8 \end{array}$	$\begin{array}{r} + \\ 6.0 \end{array}$	$\begin{array}{r} +4.5 \\ 9.1 \end{array}$

Areas		Cub. Yds.	
Cut	Fill	Exc.	Emb.
1.80	19.25	549.5	2.4
		1.6	12.5
3.82	25.66		Emb'd 134 1/2 cu. y.
			made from Cuts
0.0	30.92	1.2	26.2
		552.3	
		42.3	16.56
		594.6	43.7
	87.00		
			166.6
	272.86		
			353.3
	681.19		
			513.1
	242.45		
			210.5
0.0	41.83		
		14.2	12.9
458.9	0.0		134.2
		27.7	
103.50			
		167.0	
		208.9	

S Stations Grade

75 756+30

L	C	R
$\frac{+9.7}{10.4}$	$\frac{+8.8}{8.8}$	$\frac{+6.7}{9.7}$

7 +50

$\frac{+6.6}{9.7}$	$\frac{+4.2}{4.2}$	$\frac{+2.2}{8.6}$
--------------------	--------------------	--------------------

+70

-315

$\frac{+7.9}{10.0}$	$\frac{+6.2}{6.2}$	$\frac{+2.4}{8.6}$
---------------------	--------------------	--------------------

757+05

$\frac{+3.0}{8.8}$	$\frac{+1.7}{1.7}$	$\frac{0.0}{8.0}$
--------------------	--------------------	-------------------

+15

$\frac{+0.7}{8.2}$	0.0	$\frac{-0.9}{8.4}$
--------------------	-----	--------------------

+28 3547.51

+35

$\frac{+2.0}{8.5}$	$\frac{+0.7}{0.7}$	$\frac{0.0}{8.0}$
--------------------	--------------------	-------------------

Boulder 3x3x3

7 +55

$\frac{0.0}{8.0}$	0.0	$\frac{-1.5}{9.3}$
-------------------	-----	--------------------

+70

-293

$\frac{-1.5}{9.3}$	5.1	$\frac{-7.3}{18.0}$
--------------------	-----	---------------------

+80

$\frac{0.0}{8.0}$	3.4	$\frac{-8.9}{20.4}$
-------------------	-----	---------------------

+90

$\frac{+0.9}{8.2}$	$\frac{0.0}{6.0}$	$\frac{-7.5}{18.3}$
--------------------	-------------------	---------------------

Areas		Cub Yds	
Cut	Fill	Exc	Emb
154.04		208.9	Sta 755+60 to 757+55
		84.3	Exc. 556.1 Cy. Solid Rock
73.63			Haul 163.1 yds So free
		63.9	" 51. " N "
			" 180 from 56+40 to 55+10 = 235.
98.86			" 60 " 56+75 to 758 = 75
			Haul 310
		81.1	
26.28	0.0		
		5.4	0.4
2.80	3.15		Sta 757+05 to 758+50
		6.1	0.8 Emb'd 212.1 Cy.
13.78	0.0		Made from Cuts
		1.0	
		3.4	1.3
0.0	5.25	454.1	
		102.0	55.
		556.1	29.3
	100.42		
			33.3
0.0	79.43		
		0.1	26.3
0.90	62.70		
		0.1	12.6
		0.2	
			104.0

Stations	Grade	L	C	R
757+95		$\frac{0.0}{8.0}$	-2.8	$\frac{-9.4}{21.1}$
758+05		$\frac{0.0}{8.0}$	-2.6	$\frac{-12.3}{25.5}$
+12	3545.05			
+30		$\frac{0.0}{8.0}$	-3.1	$\frac{-5.3}{15.0}$
+50		$\frac{+2.1}{8.5}$	$+1.3$	$\frac{0.0}{8.0}$
759		$\frac{+8.9}{10.2}$	$+5.8$	$\frac{+3.7}{8.9}$
+15		$\frac{+9.7}{10.4}$	$+5.4$	$\frac{+3.3}{8.8}$
+50		$\frac{+5.1}{9.3}$	$+3.0$	$\frac{+2.0}{8.5}$
+65		$\frac{+3.1}{8.8}$	$+1.8$	$\frac{0.0}{8.0}$
+80		$\frac{0.0}{8.0}$	-2.3	$\frac{-8.3}{19.5}$
+95		$\frac{-0.8}{8.2}$	-3.9	$\frac{-7.7}{18.6}$

Stations	Grade	L	C	R
760	354.003	$\frac{0.0}{8.0}$	7.5	$\frac{-3.7}{12.6}$
+15	641.500	$\frac{+1.8}{8.5}$	$\frac{+}{0.7}$	$\frac{0.0 - 0.5}{4.0 \quad 7.8}$
+30		$\frac{0.0}{8.0}$	7.0	$\frac{-2.4}{10.6}$
+45		$\frac{-5.3}{15.0}$	4.0	$\frac{-3.5}{12.3}$
+75		$\frac{-5.2}{14.8}$	8.6	$\frac{-9.6}{21.4}$
761	296.4	$\frac{-5.7}{15.6}$	8.3	$\frac{-11.5}{24.3}$
+40		$\frac{-11.2}{23.8}$	13.0	$\frac{-12.7}{26.1}$
+50	639.45	$\frac{-9.0}{20.5}$	9.4	$\frac{-13.6}{27.4}$
762		$\frac{-0.5}{7.8}$	7.6	$\frac{-2.5}{10.8}$
+35		$\frac{-5.0}{14.5}$	5.4	$\frac{-4.8}{21.4}$

estimated on L
from 8.1

Areas
Cut Fill Exc Emb.

0.0 28.40

Ex. 7.2
2.1

61.0

Sta 760+760+30

Exp. 21.8 C.F. Solid Rock

Name M. J. R.

11.58

0.75

Ex. 3.8
2.1

5.1

0.0

17.70

15.2

6.6 59.

21.8

28.6

85.40

Sta 769+65 to 762+90

162.7 Emb. 1959.1 C.F.

207.46

Made from Cuts

2006

225.79

469.5

408.00

131.9

304.23

305.2

25.38

112.4

148.03

226.7

1711.8

cut material on L
from ditch

✓

✓

Stations	Grade	L	C	R
762+55		$\frac{-11.8}{24.7}$	73.5	$\frac{-15.3}{30.0}$

+75		$\frac{-3.9}{12.9}$	4.5	$\frac{-6.1}{16.2}$
-----	--	---------------------	-----	---------------------

+90		$\frac{0.0}{8.0}$	1.2	$\frac{-3.0}{11.5}$
-----	--	-------------------	-----	---------------------

763+05		$\frac{+2.6}{8.7}$	+1.3	$\frac{0.0}{8.0}$
--------	--	--------------------	------	-------------------

+30	26.4	$\frac{+4.9}{9.2}$	+4.0	$\frac{+2.8}{8.7}$
-----	------	--------------------	------	--------------------

+75	26.4	$\frac{+4.1}{9.0}$	+1.7	$\frac{+0.6}{8.2}$
-----	------	--------------------	------	--------------------

764+15		$\frac{+9.7}{10.4}$	+9.1	$\frac{+8.4}{10.1}$
--------	--	---------------------	------	---------------------

+70		$\frac{+11.9}{11.0}$	+10.9	$\frac{+9.6}{10.4}$
-----	--	----------------------	-------	---------------------

765		$\frac{+12.0}{11.0}$	+11.6	$\frac{+10.9}{10.7}$
-----	--	----------------------	-------	----------------------

+50		$\frac{+8.0}{10.0}$	+6.8	$\frac{+6.2}{9.6}$
-----	--	---------------------	------	--------------------

+80	3524.72			
-----	---------	--	--	--

Areas
Cut Fill Exc. Emb.

464.07

1711.8

209.1

100.48

34.1

00

22.20

3.9

4.1

21.26

0.0

1959.1

40.7 Sta 762+90 to 766+20 $\times 1557.0$
 from 762+90 to 763+50
 class L_o Rock = 93.0 @ y.
 Balance Solid R = 1464.0

83.4

33.42

Haul 106 yds So fr

147.5

" 124 " N "

960 from 64460 to 66170 = 2770

80 " 65+50 to 66+N = 100

96.1 waste

Haul 2870

165.67

375.1

202.63

233.4

217.46

315.6

123.44

157.6

1357.2

✓
V. 444

Section 15

Station	Grade	L	C	R
766		$\frac{+3.2}{8.8}$	$\frac{+}{2.7}$	$\frac{+1.1}{8.3}$
+20		$\frac{0.0}{8.0}$	0.0	$\frac{0.0}{8.0}$
+40	-2.94	$\frac{-7.3}{18.0}$	5.1	$\frac{-2.8}{11.2}$
+60		$\frac{-5.0}{14.5}$	7.9	$\frac{-10.9}{23.4}$
+80		$\frac{-1.3}{9.0}$	3.1	$\frac{-4.7}{14.1}$
767	634+15	$\frac{-0.9}{8.4}$	7.6	$\frac{-2.5}{10.8}$

Box Culverts

Stations	Size inside	Ft. B.M. Lumber
717+30	10" x 34" x 42	1116
762+55	20" x 36" x 53	1797
		2/9/13

Sta 758 Rock Drain 1x2x27 = 2.0 C4 Slope Wall

Areas Cub. Yds.
Cut Fill Exc. Emb.

40.28

1351.2

14.9

0.0

0.0

1366.1

190.9

1557.0

40.7

109.81

116.7

205.36

97.1

56.81

31.1

272.6

285.6

Excavation for Culverts

Size Cubic Yards.
Total Loose Solid
 Rock Rock

1x15x30

1.7

1.7

0.5x3x56

31

31

48

48

Station

Ditches

Size

Cubic Yds.
Total L.R.

S.R.

747 to 750+15 Side D.L

23.3

23.3

760 Surf. D.L 1x3.5x22

2.9

2.9

761+60 to 762+25 Channel L

55.4

55.4

81.6

55.4

26.2

Section 15

PAGE	Slope Wall	Excavation - Cub. Yds.				Cu. Yds. Total in Banks.
		Total in Cut	Earth	Loose Rock	Solid Rock	
29 ✓		112.2 ✓			112.2 ✓	2053.1 ✓
30 ✓		582.0 ✓		17.0 ✓	565.0 ✓	336.0 ✓
31 ✓		745.0 ✓		91.6 ✓	653.4 ✓	
32 ✓		1254.1 ✓		237.1 ✓	1017.0 ✓	181.3 ✓
33 ✓						2991.6 ✓
34 ✓		30 ✓			3.0 ✓	
34 ✓		1033.0 ✓		47.0 ✓	986.0 ✓	
35 ✓						108.4 ✓
36 ✓		1415.0 ✓		105.6 ✓	1309.4 ✓	4964.2 ✓
38 ✓		8133.5 ✓		1754.1 ✓	6379.4 ✓	1.6 ✓
39 ✓						2733.4 ✓
40 ✓						319.4 ✓
41 ✓		1989.7 ✓		100.7 ✓	1889.0 ✓	
42 ✓						1405.1 ✓
43 ✓		594.6 ✓			594.6 ✓	
44 ✓						1341.2 ✓
45 ✓		556.1 ✓			556.1 ✓	212.1 ✓
46 ✓		404.1 ✓	403.1	15.0 ✓	389.1 ✓	3881 ✓
47 ✓		21.8 ✓			21.8 ✓	1959.1 ✓
48 ✓		1557.0 ✓		93.0 ✓	1464.0 ✓	
49 ✓		4.8 ✓			4.8 ✓	2856 ✓
49 ✓	2.0	81.6 ✓		55.4 ✓	26.2 ✓	
	2.0	18487.5 ✓		2516.5 ✓	15971.0 ✓	18604.9 ✓
		18486.5			15970.0	18892.1

Summary

50

Cu. Yds. Banks made from Cuts	Cu. Yds. deducted for Shrinkage	Borrow Earth	Cu. Yds. Loose Rock	Cu. Yds. Hauled 100'	F. B. M. Lumber in Culverts
53.1 ✓	2053.1 ✓				
36.0 ✓	336.0 ✓			620. ✓	
11.3 ✓	181.3 ✓			2610 ✓	
1.6 ✓	2991.6 ✓			6380. ✓	
				1910. ✓	
8.4 ✓	108.4 ✓			4300. ✓	
42 ✓	4964.2 ✓			19300. ✓	
1.6	1.6				
33.4 ✓	2733.4 ✓				
9.4 ✓	319.4 ✓			3380. ✓	
5.1 ✓	1405.1 ✓			650. ✓	
1.2 ✓	1341.2 ✓			310. ✓	
2.1 ✓	212.1 ✓			390. ✓	
9.1 ✓	1959.1 ✓			2870. ✓	
85.6	285.6			2913. ✓	
4.9	1860.49			42720	2913

1889.77 ✓

✓

SECTION 15.COST.

EXCAVATION, L. ROCK,	2516.5 CU. YDS @	0.32 =	\$ 805.28
" S. ROCK,	15970.0 " " "	0.80 =	12776.00
HAUL, 100 FT.,	42720 " " "	0.015 =	640.80
LUMBER, FT. B.M.,	2913 " "	\$ 12.00 =	34.96
SLOPE WALL,	2 " " "	\$ 2.00 =	4.00
TOTAL			\$ 14261.04

805.28

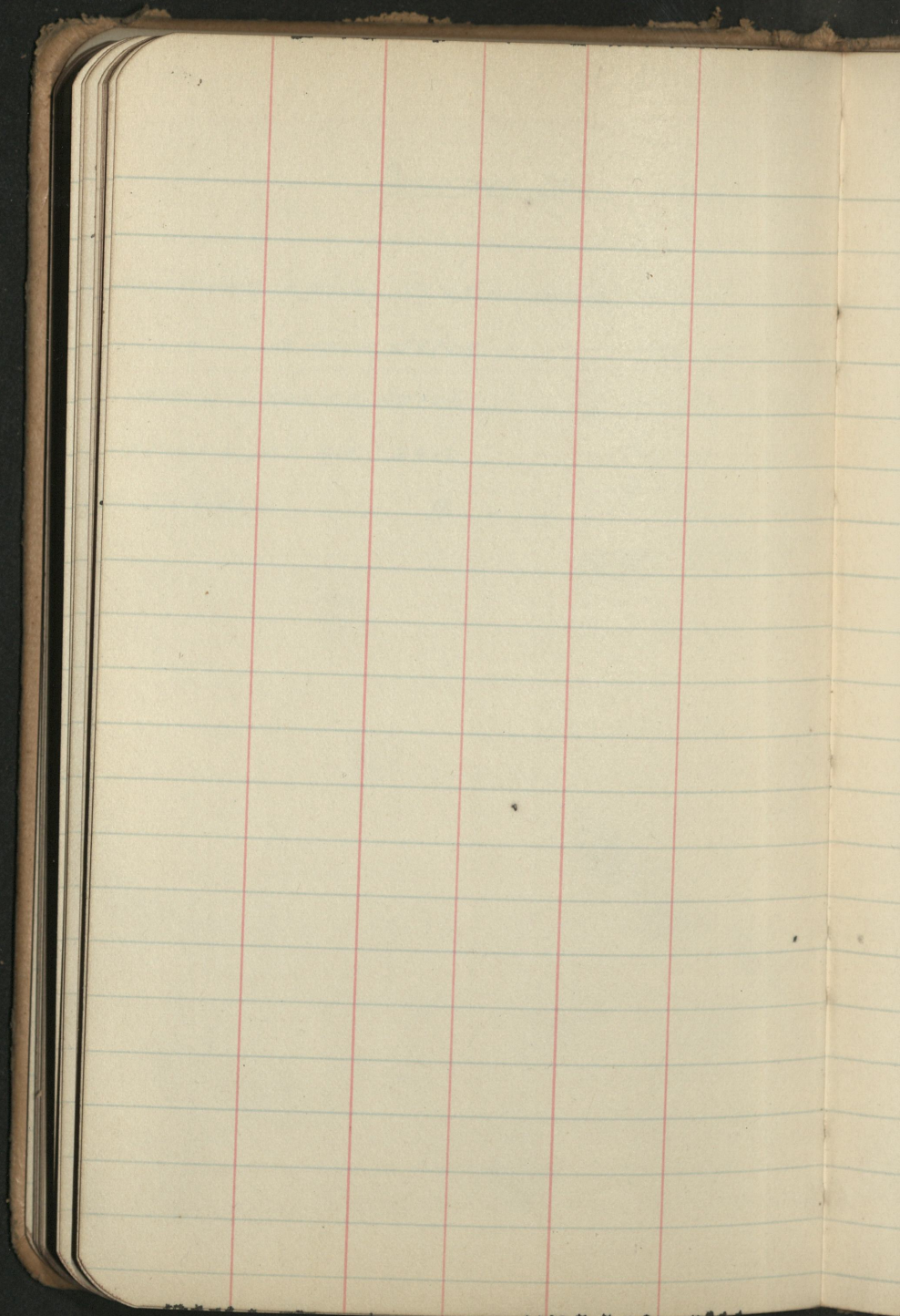
776.00

640.80

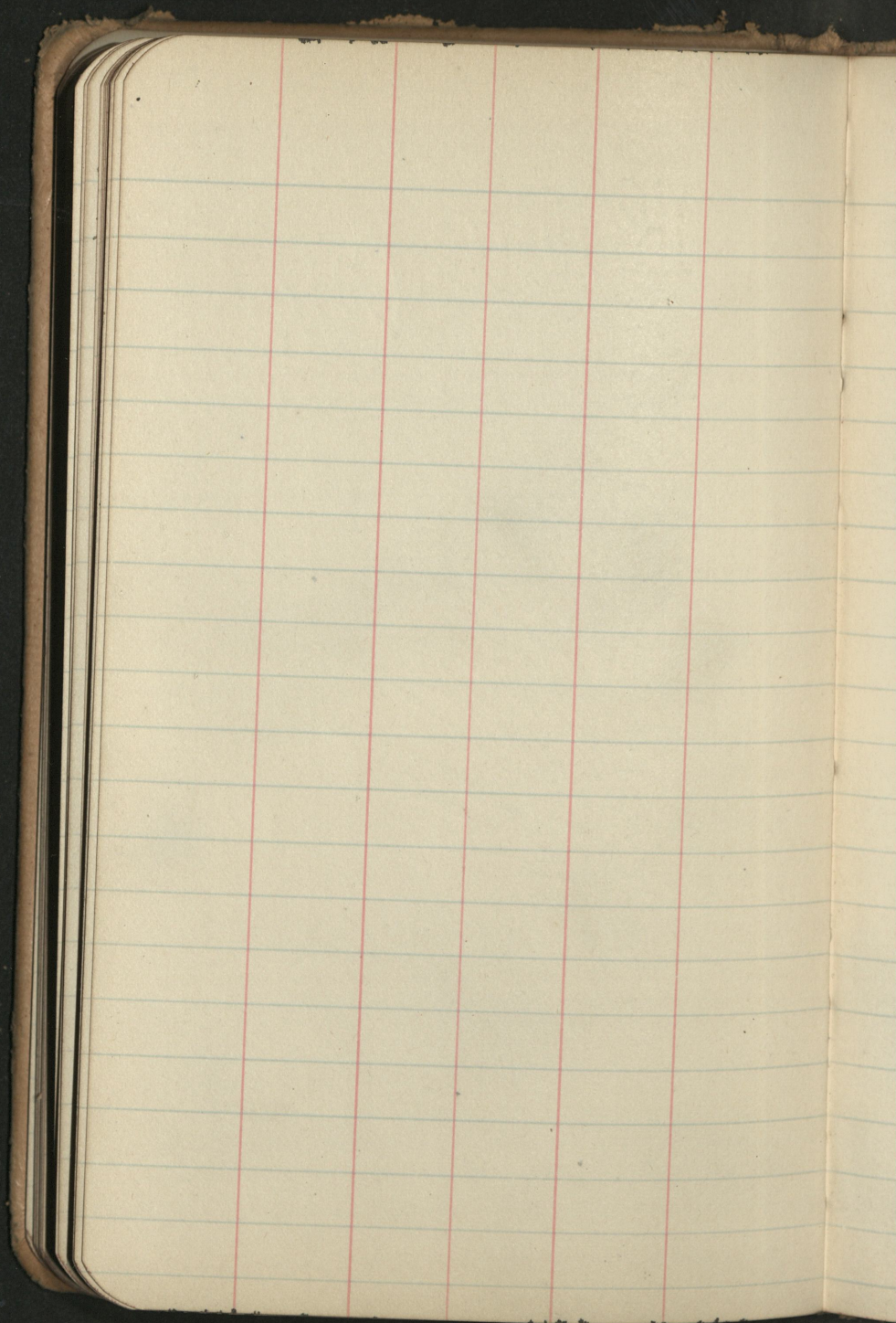
34.96

4.00

61.04



52



Section 16

Station	Grade	L	C	R
767+15	634+25	$\frac{-0.9}{5.4}$	7.6	$\frac{-2.5}{10.8}$
767+40		$\frac{-1.6}{9.4}$	3.6	$\frac{-6.9}{17.4}$
+50		$\frac{-2.1}{10.2}$	4.5	$\frac{-8.2}{19.3}$
+70		$\frac{-4.0}{13.0}$	4.2	$\frac{-4.1}{13.2}$
+90		$\frac{0.0}{8.0}$	7.3	$\frac{-1.0}{8.5}$
+95	633+25	$\frac{+0.5}{8.1}$	0.0	$\frac{0.0}{10.0}$ Extra width for turnout
768+30		$\frac{+5.2}{9.3}$	5.1	$\frac{+3.2}{10.0}$ R.B. on R 9.2
+80		$\frac{+7.3}{9.8}$	5.7	$\frac{+3.3}{8.8}$
769+10		$\frac{+2.0}{8.5}$	1.2	$\frac{0.0}{8.0}$
+20		$\frac{0.0}{8.0}$	-1.1	$\frac{-2.0}{10.0}$

296

Areas
Exc. Emb Exc Emb.

27.26 ✓

Sta 767 to 767+95

77.9 Emb on 217.2 cu.

77.99

Made from Cut
North

33.4

102.4 ✓

68.8

83.37

36.2

0.0

14.23

0.1

0.9

ra width
Turnout

2.00

0.0

217.2 ✓

3.0 R
9.2

847.4

56.2 Sta 767+90 to 769+20 Exp 360.3 cu.

Class Solid Rock 360.3 cu.

166.9 Haul 127.50 free

" 126. to Spur free

" 40 from 768+55 to 767+10 = 60 Haul

954.1

62.9

17.90

0.0

2.2

2.1

0.0

16.90

288.3 ✓

72.0 54.

360.3

2.1

4.2 ✓

Stations Grade

L

C

R

769 +30

$\frac{+36}{8.9}$

+1.9

$\frac{0.0}{8.0}$

+80

$\frac{+12.0}{11.0}$

+1.2

$\frac{+10.2}{10.6}$

-2.94

770

$\frac{+13.0}{11.3}$

+1.4

$\frac{+10.0}{10.5}$

+60

$\frac{+16.2}{12.7}$

+1.6

$\frac{+12.3}{11.1}$

+60.9 3510.58

+95

$\frac{+15.2}{11.8}$

+1.9

$\frac{+14.0}{11.5}$

771 +20

$\frac{+11.8}{11.0}$

+1.6

$\frac{+11.9}{11.0}$

-3.22

+60

$\frac{+3.0}{8.8}$

+3.0

$\frac{+6.2}{9.6}$

+65

$\frac{+1.8}{8.5}$

+3.7

$\frac{+6.4}{9.6}$

+68.9 3507.10

+80 62.9 + 20

$\frac{+3.7}{8.9}$

+5.2

$\frac{+6.1}{9.5}$

-3.50

772 +20

$\frac{+1.9}{8.5}$

+1.8

$\frac{0.0}{8.0}$

Areas		Cub Yds.	
Exc.	Emb.	Exc.	Emb.

30.45 00

222.4

209.76

Sta 769+20 to 772+30 Exp

157.8 2050.5 Cu yds. Solid Rock

216.76

Haul 3 yds So far

555.1

" 90=N "

283.36

" 900 from 771 to 774+60 = 3240

" 470 " 769+80 to Spue 330 = 1550

" 409.9 waste

371.9

Total haul

4790

290.43

227.2

200.40

196.1

64.40

12.1

66.29

42.6

87.04

81.1

22.45

0.0

2.8	
1872.9	
177.6	59.08
<u>2050.5</u>	

✓
100%

773

$$\begin{array}{r} -7.0 -7.0 \\ 17.5 \quad 13.0 \quad 2.2 \quad 0.0 \\ \hline 8.0 \end{array}$$

+35

-3.50

$$\begin{array}{r} -2.5 -2.2 \quad 0.0 \\ 18.3 \quad 15.0 \quad 2.5 \quad 0.8 \quad 1.35 \\ \hline 8.9 \end{array}$$

+60

$$\begin{array}{r} -7.7 -7.8 \\ 18.6 \quad 12.0 \quad 3.3 \quad 0.0 \\ \hline 8.0 \end{array}$$

+70

$$\begin{array}{r} -8.3 -8.2 \\ 19.5 \quad 14.0 \quad 7.9 \quad 0.0 \\ \hline 8.0 \end{array}$$

774

$$\begin{array}{r} -7.0 -7.9 \\ 17.5 \quad 12.0 \quad 2.6 \quad 0.0 \quad 1.8 \\ \hline 8.5 \end{array}$$

+10

$$\begin{array}{r} -6.9 -8.0 \quad 8.0 \\ 17.4 \quad 15.0 \quad 10.0 \quad 3.9 \quad 0.0 \\ \hline 8.0 \end{array}$$

+35

$$\begin{array}{r} -7.6 \\ 18.4 \quad 7.4 \quad -3.7 \\ \hline 12.6 \end{array}$$

Areas
Exca. Embk Exc. Cub Yds Emb.

0.0

6.85

0.8 ✓

10.6

50.46

110.2 ✓

119.61

84.7

0.0

63.35

8.0

61.1

18.56

30.84

Sta 773 to 774 + 10 ✓

5.7

54.2 ✓ Exc. 15.0 C.Y. Solid Rock

0.0

86.29

29.3

0.0

71.80

1.0

80.8

27.0

73.73

0.3

31.6

15.0 ✓

0.0

97.10

116.4

154.25

84.4

664.1 ✓

S. Stations Grade

7 774+50

L	C	R
$\frac{-3.4}{12.1}$	$\frac{-8.1}{11.0}$	$\frac{-5.6}{15.4}$

775

$\frac{-8.7}{20.1}$	$\frac{-9.6}{18.0}$	$\frac{-1.8}{9.7}$
---------------------	---------------------	--------------------

+15 626+05

$\frac{-8.7}{20.1}$	$\frac{-9.5}{14.0}$	$\frac{-2.4}{10.6}$
---------------------	---------------------	---------------------

7

+45

$\frac{-6.0}{16.0}$	$\frac{-10.2}{10.0}$	$\frac{-6.9}{17.4}$
---------------------	----------------------	---------------------

+70

$\frac{-1.7}{10.6}$	$\frac{-10.4}{12.0}$	$\frac{-10.6}{22.9}$
---------------------	----------------------	----------------------

+90

$\frac{0.0}{8.0}$	$\frac{-3.2}{11.1}$	$\frac{-11.1}{23.7}$
-------------------	---------------------	----------------------

776+20

$\frac{+4.7}{9.2}$	$\frac{+2.3}{6.5}$	$\frac{-2.7}{18.6}$
--------------------	--------------------	---------------------

7

+35

$\frac{+2.7}{8.7}$	$\frac{-12.0}{0.0}$	$\frac{-11.8}{24.7}$
--------------------	---------------------	----------------------

+50

$\frac{+5.7}{9.4}$	$\frac{+2.4}{5.5}$	$\frac{-1.5}{9.3}$
--------------------	--------------------	--------------------

+85

$\frac{+4.2}{9.1}$	$\frac{0.0}{22.8}$	$\frac{-10.5}{22.8}$
--------------------	--------------------	----------------------

-3.50

Areas		Cub. Yds	
Exc	Emb	Exc.	Emb
	149.69		664.1 ✓
			280.5
	153.27		
			78.7
	130.01		
			202.1
	233.75		
			187.8
	171.98		
			96.9
0.0	89.57		
		slip 1.5	
		13.7	50.8
36.86	193		
		slip 1.2	
		13.2	20.4
10.80	71.48		
		s. 1.6	
		14.3	20.2
40.68	1.13		
		s 3.7	
		37.2	24.5
16.80	36.75		
		s 1.5	
		18.2	10.3
		106.1	1636.3 ✓

LTH

Stations	Grade	L	C	R
777		$\frac{+6.2}{9.6}$	$\frac{+2.9}{7.9}$	$\frac{0.0}{7.0} \frac{-0.5}{7.8}$
+05		$\frac{+5.8}{9.5}$	+3.0	$\frac{0.0}{8.0}$
+30		$\frac{+4.2}{9.1}$	$\frac{+1.5}{6.5}$	$\frac{-1.0}{8.5}$
+60		$\frac{+6.6}{9.7}$	$\frac{+3.6}{8.0}$	$\frac{0.0}{8.0}$
+75	-3.5.0	$\frac{+3.2}{8.8}$	0.0	$\frac{-4.7}{14.1}$
778 +30		$\frac{+6.8}{9.7}$	$\frac{+4.2}{6.0}$	$\frac{-3.1}{11.7}$
+75	22+48	$\frac{+2.3}{8.6}$	+1.0	$\frac{0.0}{8.0}$
+85		$\frac{0.0}{8.0}$	-2.6	$\frac{-6.2}{16.3}$
779 +05		$\frac{+2.7}{8.7}$	+1.0	$\frac{0.0}{8.0}$
+55		$\frac{+4.9}{9.2}$	$\frac{+3.7}{8.3}$	$\frac{+1.2}{8.3}$

Areas		Cub. Yds		
Exc.	Emb	Exc.	Emb.	
48.87	0.20	106.1	163.63	✓
		S. 0.8		
		9.1	0.1	
49.45	0.0	S. 3.8		Sta 777+10 to 779+05 ✓
		36.1	0.1	Emb 1675.9 @ 4. ✓
28.50	0.25	S. 3.8		Made from Cuts
		48.2	0.1	South 2 m side
58.26	0.0	S. 1.2		
		19.7	3.0	
12.80	16.45	S. 2.2		Sta 775+90 to 779+60 ✓
		74.3	18.3	Exc 477.2 Cuts & ✓
60.17	1.55	S. 4.0		Class Slips
		64.8	1.3	Loose Rock = 29.9 ✓
				Balance of
				Cut Solid Rock = 447.3 ✓
17.50	0.0	S. 0.6		Haul 110 So far
		2.1	6.6	" 97.2 N "
0.0	53.29	S. 0.4		" 140 from 777+40 to 775+75 ✓
		4.7	13.1	" 1300 778+35 to 780+25 ✓
				= 260 ✓
19.15	0.0			Total Haul 490 ✓
		S. 3.0		1678.9 ✓
		70.3		
56.77		S. 0.6		
		19.7		
				475.5 ✓

Stations Grade

779+70

$\begin{array}{r} L \\ +1.6 \\ \hline 8.4 \end{array}$

$\begin{array}{r} C \\ +0.9 \end{array}$

$\begin{array}{r} R \\ 0.0 \\ \hline 8.0 \end{array}$

+80

$\begin{array}{r} 0.0 \\ \hline 8.0 \end{array}$

-7.3

$\begin{array}{r} -3.1 \\ \hline 11.7 \end{array}$

780+10

$\begin{array}{r} -4.6 \\ \hline 13.9 \end{array}$

-8.4

$\begin{array}{r} -11.2 \\ \hline 23.8 \end{array}$

+25

$\begin{array}{r} -2.4 \\ \hline 10.6 \end{array}$

-4.9

$\begin{array}{r} -15.6 \\ \hline 30.4 \end{array}$

+60

$\begin{array}{r} -5.3 \\ \hline 15.0 \end{array}$

-9.2

$\begin{array}{r} -23.3 \\ \hline 42.0 \end{array}$

+75

$\begin{array}{r} -2.2 \\ \hline 10.3 \end{array}$

-4.3

$\begin{array}{r} -23.8 \\ \hline 42.7 \end{array}$

781

$\begin{array}{r} -0.9 \\ \hline 8.4 \end{array}$

-2.7

$\begin{array}{r} -7.7 \\ \hline 18.6 \end{array}$

+60

$\begin{array}{r} 0.0 \\ \hline 8.0 \end{array}$

0.0

$\begin{array}{r} -0.9 \\ \hline 8.4 \end{array}$

+75

$\begin{array}{r} -1.3 \\ \hline 9.0 \end{array}$

-2.1

$\begin{array}{r} -1.8 \\ \hline 9.7 \end{array}$

782

$\begin{array}{r} -8.0 \\ \hline 19.0 \end{array}$

-9.4

$\begin{array}{r} -12.1 \\ \hline 28.2 \end{array}$

-3.50

Areas		Cub. Yds.	
Exc.	Emb.	Exc.	Emb.
		4455	✓

13.78

66

17

29

60

2365

477.2

Sta 779 + 70 to 783 + 35

131.8 Ench. 3476.5 Ch.

21364

310.5 Cy. made from

1047 Cut So

16345

Balance 5166.0 ✓
less 5% 158.3 ✓

3408

Borrowed 3007.7 C.Y.

36230

Class 85% tax = 2556.5
15% L.R. = 451.2

157.6

Haul on bottom
net = 1400 yds.

20495

125.7

6655

77.4

100

315

93

3048

1429

278.09

763.7

18568

✓ 1964

Stations	Grade	L	C	R
782+25	-350	$\begin{array}{r} -236 \\ 41.9 \end{array}$	$\begin{array}{r} -26.0 \end{array}$	$\begin{array}{r} -28.4 \\ 49.6 \end{array}$
+35		$\begin{array}{r} -238 \\ 42.7 \end{array}$	$\begin{array}{r} -26.4 \end{array}$	$\begin{array}{r} -28.4 \\ 49.6 \end{array}$
+50	3469.26			
+65		$\begin{array}{r} -56 \\ 18.4 \end{array}$	$\begin{array}{r} -7.7 \end{array}$	$\begin{array}{r} -11.6 \\ 24.4 \end{array}$
783+15		$\begin{array}{r} 0.0 \\ 8.0 \end{array}$	$\begin{array}{r} -0.6 \end{array}$	$\begin{array}{r} -1.4 \\ 9.1 \end{array}$
+35		$\begin{array}{r} +23 \\ 8.6 \end{array}$	$\begin{array}{r} +1.2 \end{array}$	$\begin{array}{r} 0.0 \\ 8.0 \end{array}$
+50	-334	$\begin{array}{r} +25 \\ 8.6 \end{array}$	$\begin{array}{r} +1.5 \end{array}$	$\begin{array}{r} +0.6 \\ 8.2 \end{array}$
784		$\begin{array}{r} +24 \\ 8.6 \end{array}$	$\begin{array}{r} +1.5 \end{array}$	$\begin{array}{r} 0.0 \\ 8.0 \end{array}$
+60		$\begin{array}{r} +36 \\ 8.9 \end{array}$	$\begin{array}{r} +2.1 \end{array}$	$\begin{array}{r} +0.8 \\ 8.2 \end{array}$
785		$\begin{array}{r} +4.2 \\ 9.1 \end{array}$	$\begin{array}{r} +3.0 \end{array}$	$\begin{array}{r} +1.6 \\ 8.4 \end{array}$
+35		$\begin{array}{r} +2.9 \\ 8.7 \end{array}$	$\begin{array}{r} +1.3 \end{array}$	$\begin{array}{r} 0.0 \\ 8.0 \end{array}$
+55	3459.07			

Areas		Cub. Yds.	
Emb	Exc	Exc.	Emb.

1371.50

1856.8 ✓

513.4

1401.06

897.0

213.43

206.9

0.0

10.03

4.7

2.4

1916

0.0

3476.5 ✓

25.00

12.3 Sta 783+15 to 785+60 Exp 241.1 Cu

783+15 to 784+60 Class Matl

43.6 Loose Rock = 124.6 Cu

Class Balance of

Cut Solid Rock = 116.5 ✓

22.05

64.0 Haul 6.1 N. free

35.55

180 from 784+30 to 786+80 = 450 ✓

62.9

49.45

46.6

22.45

0.0

7.0

7.0

241.1

✓

Stations Grade

785+60

L

C

R

$\frac{0.0}{8.0}$

7.2

$\frac{-3.1}{11.5}$

+90

$\frac{-3.0}{11.5}$

4.9

$\frac{-7.3}{17.9}$

786+05

$\frac{0.0}{8.0}$

3.1

$\frac{-5.1}{14.5}$

+35

$\frac{+2.7}{8.7}$

+0.6 $\frac{0.0}{2.0}$

$\frac{-1.2}{8.8}$

+60

$\frac{0.0}{8.0}$

2.0

$\frac{-4.4}{13.6}$

+70

$\frac{-1.5}{9.2}$

3.6

$\frac{-6.8}{17.2}$

+80

$\frac{0.0}{8.0}$

7.4

$\frac{-4.6}{13.9}$

787

$\frac{0.0}{8.0}$

7.8

$\frac{-5.1}{14.6}$

+30

$\frac{-2.4}{10.6}$

4.7

$\frac{-7.7}{18.6}$

+50

$\frac{0.0}{8.0}$

-0.8

$\frac{-2.8}{11.2}$

-350

61

Areas		Cub. Yds	
Exc	Emb	Exc.	Emb.

0.0	22.55		7.0
			72.6

108.08

44.7

0.0	52.72		
-----	-------	--	--

5.2

31.0 Sta 786+05 to 786+60

14.01	3.00		
-------	------	--	--

Exc. 9.5 Cuff Solid Rock

4.3

18.5

0.0	37.00		
-----	-------	--	--

9.5

21.0

76.57

20.0

31.43

25.8

38.19

49.0

103.97

45.0

0.0	17.48		
-----	-------	--	--

5.4

4.3

368.9

✓

Stations Grade

787+70

$\frac{+30}{8.8}$

$+1.2$

$\frac{0.0}{8.0}$

+95

$\frac{0.0}{8.0}$

-0.5

$\frac{-3.6}{12.4}$

788+10

$\frac{-2.0}{10.0}$

$\bar{3}.1$

$\frac{-6.5}{16.7}$

+35

$\frac{0.0}{8.0}$

-1.8

$\frac{-2.2}{17.8}$

+50

$\frac{+1.4}{8.4}$

$\frac{0.0}{4.0}$

-1.0

$\frac{-2.2}{10.3}$

+85

-3.50

$+12+30$

$\frac{0.0}{8.0}$

-0.9

$\frac{-2.9}{11.3}$

789+15

$\frac{-3.7}{12.5}$

$\bar{5}.7$

$\frac{-8.5}{19.7}$

+35

$\frac{-1.4}{9.1}$

$\bar{3}.4$

$\frac{-4.7}{14.1}$

+55

$\frac{-4.7}{14.1}$

-7.1

$\frac{-11.2}{23.8}$

+90

$\frac{0.0}{8.0}$

-7.4

$\frac{-4.0}{13.0}$

790

344350

240

Areas		Cub. Yds.	
Exc.	Emb.	Exc.	Emb.
22.08	0.0	54	368.9
		Sta 787+50 to 787+95	
		68	5.5 Exc 12.2 Cy. Lo. Rock
0.0	17.70	17.7	
		24.7	
	71.14	55.4	
0.0	48.42		
		0.5	17.6
28.0	14.85	Sta 788+35 to 788+85	
		1.2	21.8 Exc. 1.7 Cy. Lo. Rock
0.0	18.84	1.7	
		42.6 Sta 785+35 to 790+50	
	134.47	Emb'd 1027.9 Cusps	
		72.3	905.5 Made from Cuts
	60.79	Balance 122.4 Cy. made from meas. pits. Class	
		92.9	Earth Buried 122.4
	190.19		
		141.9	
	28.70		
		19.4	
		863.0	

Stations Grade

L

C

R

790+05

$\frac{0.0}{8.0}$

7.6

$\frac{-6.2}{16.3}$

+30

$\frac{-3.8}{12.7}$

7.0

$\frac{-10.6}{22.9}$

+50

$\frac{0.0}{8.0}$

0.0

$\frac{0.0}{8.0}$

+75

$\frac{+6.6}{9.7}$

+5.6

$\frac{+4.7}{9.2}$

791+10

$\frac{+8.7}{10.2}$

+7.8

$\frac{+6.5}{9.6}$

+45

$\frac{+2.3}{8.6}$

+1.9

$\frac{+1.2}{8.3}$

+65

$\frac{+4.3}{9.1}$

+2.2

$\frac{0.0}{8.0}$

+80

$\frac{+1.2}{8.3}$

0.0

$\frac{-1.1}{8.7}$

792+15

$\frac{+3.2}{8.8}$

+1.7

$\frac{0.0}{8.0}$

+25

$\frac{+5.2}{9.3}$

+2.5

$\frac{+1.2}{8.3}$

280

Areas		Cub. Yds	
Exc	Emb	Exc.	Emb.
	4114		863.0 ✓
			100.1
	175.00		64.8
0.0	0.0		1027.9 ✓
		45.4	
98.12			
		153.0	
138.02			
		108.9	
30.06			
		24.5	
36.01	0.0		
		11.3	0.7
48.0	38.5		
		20.7	1.7
27.08	0.0		2.4
		138	
47.60			
		36.6	
		414.2 ✓	

✓
1947

Stations Grades

L

C

R

792+055

$\frac{+25}{8.6}$

+1.0

$\frac{0.0}{8.0}$

793

$\frac{+7.7}{9.9}$

+6.7

$\frac{+0.5}{9.4}$

+05

$\frac{+3.6}{8.9}$

+1.8

$\frac{0.0}{8.0}$

+85

$\frac{+3.3}{8.8}$

+2.8

$\frac{+1.9}{8.5}$

794

-280

$\frac{0.0}{8.0}$

+0.5

$\frac{+0.5}{8.1}$

+05

$\frac{-0.6}{7.9}$

-0.4

$\frac{0.0}{8.0}$

+25

$\frac{-7.3}{18.0}$

-5.7

$\frac{-0.4}{15.1}$

+50

$\frac{-4.3}{13.5}$

-8.8

$\frac{-2.4}{25.6}$

+70

$\frac{0.0}{8.0}$

7.3

$\frac{-2.7}{11.1}$

+75

$\frac{+2.7}{8.7}$

+0.9

$\frac{0.0}{8.0}$

Areas		Cub Yds	
Exc.	Emb	Exc.	Emb
18.30		414.2	Sta 790+50 to 794+05 Exp. 8 1/2 Cu.
		113.1	790+50 to 792+90 = 502.0
117.45			Class Lo. Rock 320 Cu.
			Solid " 470.0
			792+90 to 794+05 = 231.2
		149.8	Class 90% Lo Rock = 208.1 Cu.
			10% Solid " = 23.1
29.61			" Subgrade Solid Rock - 80.0
		41.5	Total Loose Rock 240.1 Cu. yds.
45.02			" Solid " 573.1
		14.2	Haul 150 So. free
			" 113.2 N "
			" 270 from 791+40 to 789+50 = 520
6.03	0.0		" 200 " 793 to 794+60 = 320
			Total haul 840
		0.4	0.3
0.0	5.28	733.2	Sta 794 to 794+75
		80.0 = 0.454	
		813.2	53.4 Emb. 319.5 Cu. yds.
	138.79		Made from Cur. So.
		171.0	
	230.49		
		93.5	
0.0	21.86		
		1.1	1.3
183.2	0.0	319.5	
		4.0	
		5.1	

144.4

Station Grade

L

C

R

Ex

794+80

$\begin{array}{r} +2.5 \\ 8.6 \end{array}$

$\begin{array}{r} +1.5 \\ 8.5 \end{array}$

$\begin{array}{r} +0.6 \\ 8.2 \end{array}$

+95

$\begin{array}{r} +1.4 \\ 8.4 \end{array}$

$\begin{array}{r} +0.5 \\ 8.0 \end{array}$

$\begin{array}{r} 0.0 \\ 8.0 \end{array}$

795

3429.50

795+10

$\begin{array}{r} 0.0 \\ 8.0 \end{array}$

$\begin{array}{r} -1.6 \\ 11.4 \end{array}$

$\begin{array}{r} -2.9 \\ 11.4 \end{array}$

+30

$\begin{array}{r} +2.7 \\ 8.7 \end{array}$

$\begin{array}{r} +1.3 \\ 8.0 \end{array}$

$\begin{array}{r} 0.0 \\ 8.0 \end{array}$

+65

$\begin{array}{r} +4.5 \\ 9.1 \end{array}$

$\begin{array}{r} +3.3 \\ 8.6 \end{array}$

$\begin{array}{r} +2.2 \\ 8.6 \end{array}$

796+10

$\begin{array}{r} +2.5 \\ 8.6 \end{array}$

$\begin{array}{r} +1.1 \\ 8.0 \end{array}$

$\begin{array}{r} 0.0 \\ 8.0 \end{array}$

+35

$\begin{array}{r} +3.6 \\ 8.9 \end{array}$

$\begin{array}{r} +2.4 \\ 8.3 \end{array}$

$\begin{array}{r} +1.3 \\ 8.3 \end{array}$

+55

$\begin{array}{r} +1.7 \\ 8.4 \end{array}$

$\begin{array}{r} +0.7 \\ 8.0 \end{array}$

$\begin{array}{r} 0.0 \\ 8.0 \end{array}$

+65

$\begin{array}{r} +1.4 \\ 8.4 \end{array}$

$\begin{array}{r} 0.0 \\ 8.8 \end{array}$

$\begin{array}{r} -1.2 \\ 8.8 \end{array}$

+95

$\begin{array}{r} +2.3 \\ 8.6 \end{array}$

$\begin{array}{r} +1.4 \\ 8.0 \end{array}$

$\begin{array}{r} 0.0 \\ 8.0 \end{array}$

Areas		Cub. Yds.	
Exc	Emb	Exc	Emb

25.00

5.1

9.6

Sta 794+95 to

9.70

0.0

Sta 795+30

1.8

4.8

Emb. 11.1 yds.

0.0

25.67

Made from cuts

5.3

6.3

11.1

21.65

0.0

50.3

Sta 794+70 to 797+15 Exc 207.5 Cu.

56.01

Class $\frac{2}{3}$ Earth = 138.3 Cu.

62.6

 $\frac{1}{3}$ Lo Rock = 69.2

19.13

0.0

Haul 47.5 m. free

" 160 from 795+65 to 797+55 = 300

27.5

40.24

19.5

12.54

0.0

3.4

0.5

5.60

4.20

14.7

1.5

20.84

0.0

7.7

207.5

20.0

✓

Station Grade

L

C

R

797+15

$\frac{00}{80}$

00

$\frac{00}{80}$

+50

$\frac{-130}{265}$

60

$\frac{-47}{141}$

798

320

$\frac{-115}{243}$

713

$\frac{-191}{357}$

+35

$\frac{-84}{196}$

728

$\frac{-210}{385}$

+65

$\frac{-132}{268}$

755

$\frac{-182}{343}$

799

341670

$\frac{-172}{328}$

206

$\frac{-246}{439}$

+50

$\frac{-49}{144}$

64

$\frac{-86}{199}$

800+05

$\frac{00}{80}$

04

$\frac{-10}{85}$

+20

200

$\frac{+17}{84}$

+09

$\frac{00}{80}$

+50

$\frac{+35}{89}$

+24

$\frac{+12}{83}$

Areas		Cub Yds	
Exc.	Emb	Exc	Emb.
0.0	0.0		2.0
			See 996+55 to 500+20
		119.1	Emb'd 4337.8 Cuts
	183.75		402.5 Cy. made from Cuts
		749.9	Balance 3935.3
	626.10		less 5% 196.7
			Borrowed 3738.6 Cy.
		713.5	Class
			90% Earth = 3364.7 Cy.
	474.74		10% Lo Rock = 373.9 "
		587.9	
	583.42		Haul on Borrowed Mat'l = 1200
		985.0	
	936.31		
		1012.3	
	157.01		
		166.8	
0.0	680		
		2.6	1.3
14.18	0.0		4337.8
		29.8	
39.44			
		49.7	
		82.1	

Stations	Grade	L	C	R
801		$\frac{+19}{85}$	$+0.8$	$\frac{00}{80}$
+50		$\frac{+36}{89}$	$+2.3$	$\frac{+11}{83}$
+60		$\frac{+24}{86}$	$+0.5$	$\frac{00}{80}$
+70		$\frac{00}{80}$	-2.6	$\frac{-34}{121}$
+90	200	$\frac{-53}{150}$	-7.4	$\frac{-101}{222}$
802+10	1	$\frac{-11}{87}$	-1.6	$\frac{00}{80}$
+25		$\frac{00}{80}$	$+2.8$	$\frac{+37}{89}$
+50		$\frac{+68}{97}$	$+6.3$	$\frac{+54}{94}$
+85		$\frac{+114}{109}$	$+10.6$	$\frac{+93}{103}$
803+50	340770	$\frac{+110}{108}$	$+9.7$	$\frac{+88}{102}$

Areas	Exc	Emb	Cub. Yds	Exc	Emb
1420			82.1	Sta 800+05 to 801+70	Exc 142.4 Cu.
				Class 1/3 Earth =	47.4 Cu.
			48.9	2/3 Lo Rock	95.0 "
38.58				Haul 62.4 So far	
			4.7	" 80 from 801+25 to 799+65 =	130.
13.75		0.0			
			1.7	4.7	
0.0		38.03	142.4	Sta 801+60 to 802+25	
				85.0 Emb & 170.2 Cu. yds	
		191.54		Made from Cut N.	
				77.3	
0.0		17.21			
			7.1	32	
38.46		0.0	170.2	Sta 802+10 to 804+95	Exc 162.60 Cu.
			68.2	Class Matl in regular section	
				from 801 to 802+85 S.R. =	272.4 Cu.
108.97				from 801+85 to 803+50	
				Top 2 1/2 ft. Lo. Rock =	120.8 Cu.
			197.1	Balance S.R. =	332.0 "
195.76				803+50 to 804+25	
				75% Lo. R. =	356.1 "
			Slp 10.4	25% S.R. =	118.7 "
			452.8	804+25 to 804+95	
				Lo. R.	30.0 "
181.05				S.R.	211.3 "
			S 21.9	Slips Lo. R.	103.1 "
			325.1	Subgrade S.R.	80.6 "
			1082.6		

Stations	Grade	L	C	R
804		$\frac{+10.3}{10.6}$	$\frac{+9.2}{9.2}$	$\frac{+8.4}{10.1}$
+55		$\frac{+7.3}{9.8}$	$\frac{+6.9}{6.9}$	$\frac{+6.9}{9.7}$
+85		$\frac{0.0}{8.0}$	$\frac{+}{2.1}$	$\frac{+4.2}{9.1}$
+95		$\frac{-6.5}{16.8}$	$\frac{7.7}{7.7}$	$\frac{0.0}{8.0}$
805+25	-3135	$\frac{-7.2}{17.8}$	$\frac{73.1}{180}$	$\frac{-13.8}{24.4}$
+55		$\frac{-2.7}{11.1}$	$\frac{3.7}{3.7}$	$\frac{-16.0}{31.0}$
+75		$\frac{-1.4}{9.1}$	$\frac{7.5}{7.5}$	$\frac{0.0}{8.0}$
+80		$\frac{0.0}{8.0}$	$\frac{0.0}{0.0}$	$\frac{0.0}{8.0}$
+85		$\frac{+1.9}{8.5}$	$\frac{+1.2}{1.2}$	$\frac{+0.2}{8.1}$
806+15		$\frac{+3.0}{8.8}$	$\frac{+2.0}{2.0}$	$\frac{+1.2}{8.3}$

Areas		Cub Yds	
Exc	Emb.	Exc	Emb.
170.02		1082.6	
		Total Loose Rock	610.0 Cu.
		" Solid "	1016.0 "
		S. 46.2	
		299.5	
124.07		Haul 13. So far	
		" 203.4 N "	
		" 240 from 804 + 20 to 805 + 35 = 280.	
		S. 23.7	
		" 970 " 803 + 55 " 807 + 40 = 3730.	
		88.2	
		Total Haul	4010.
34.76	0.0		
		S. 0.9	
		4.3	5.4
0.0	43.83	1545.4	
		80.6 = 1/2 S.G.	
		1626.0	
		226.7 Emb'd	575.3 Cu.
364.25		Make from Cut So.	
		282.0	
143.34		59.6	
17.73			
0.0	0.0	1.6	
		575.3	
18.36		1.7 Sta 805 + 80 to 806 + 90 Exc	
		63.5 Cu. Solid Rock	
33.90		29.0 Haul North far	
		27.8	
		58.5	

Stations Grade		L	C	R
806+45		$\begin{array}{r} +20 \\ \hline 8.5 \end{array}$	$+1.0$	$\begin{array}{r} 0.0 \\ \hline 8.0 \end{array}$
+70		$\begin{array}{r} 0.0 \\ \hline 8.0 \end{array}$	0.8	$\begin{array}{r} -2.5 \\ \hline 10.8 \end{array}$
807		$\begin{array}{r} -6.5 \\ \hline 16.8 \end{array}$	5.1	$\begin{array}{r} -9.9 \\ \hline 21.9 \end{array}$
+50		$\begin{array}{r} -11.8 \\ \hline 24.7 \end{array}$	$\begin{array}{r} -16.0 \\ \hline 14.0 \end{array}$	$\begin{array}{r} -22.0 \\ \hline 40.0 \end{array}$
+65		$\begin{array}{r} -10.0 \\ \hline 22.0 \end{array}$	11.3	$\begin{array}{r} -13.5 \\ \hline 27.3 \end{array}$
+85		$\begin{array}{r} -4.8 \\ \hline 14.2 \end{array}$	3.8	$\begin{array}{r} -9.0 \\ \hline 20.5 \end{array}$
808				
808+20		$\begin{array}{r} -4.0 \\ \hline 13.0 \end{array}$	5.4	$\begin{array}{r} -7.6 \\ \hline 18.4 \end{array}$
+50		$\begin{array}{r} -12.1 \\ \hline 25.2 \end{array}$	13.5	$\begin{array}{r} -18.0 \\ \hline 34.0 \end{array}$
+75		$\begin{array}{r} -4.5 \\ \hline 13.8 \end{array}$	5.0	$\begin{array}{r} -3.5 \\ \hline 12.3 \end{array}$
808+90		$\begin{array}{r} 0.0 \\ \hline 8.0 \end{array}$	0.0	$\begin{array}{r} 0.0 \\ \hline 8.0 \end{array}$

-31.35

-19.2

Areas Cub Yds
Exc. Emb Exc Emb.

1625 0.0

58.5 ✓

5.0 5.0

63.5 ✓

0.0 1627

Sta 806+45 to 808+90 ✓

95.7 Emb'd 2172.7 C.Y.

156.08

Made from Cuts

793.0

700.40

294.8

360.80

175.9

1142.3

155.3

125.38

350.2

504.95

276.9

93.25

25.9

0.0

0.0

2172.7 ✓

Slip

20.0

41.7 ✓

61.7

✓
441

Stations Grade

L

C

R

809+15

$\frac{+6.8}{9.7}$

$\frac{+4.9}{4.9}$

$\frac{+4.2}{9.1}$

+50

$\frac{+9.3}{10.3}$

$\frac{+8.3}{8.3}$

$\frac{+7.7}{9.9}$

+80

$\frac{+10.6}{10.7}$

$\frac{+10.2}{10.2}$

$\frac{+9.2}{10.3}$

810

$\frac{+10.4}{10.6}$

$\frac{+9.8}{9.8}$

$\frac{+9.1}{10.3}$

+30

$\frac{+4.9}{9.2}$

$\frac{+5.6}{5.6}$

$\frac{+6.3}{9.6}$

810 +65

$\frac{0.0}{8.0}$

$\frac{+0.6}{+0.6}$

$\frac{+1.9}{8.5}$

+85

$\frac{-0.9}{8.4}$

$\frac{-0.8}{-0.8}$

$\frac{0.0}{8.0}$

811

$\frac{-2.1}{10.2}$

$\frac{-2.4}{-2.4}$

$\frac{-2.2}{10.3}$

+15

$\frac{-4.0}{13.0}$

$\frac{-3.1}{-3.1}$

$\frac{-4.2}{13.3}$

+30

$\frac{-3.0}{11.5}$

$\frac{-5.6}{-5.6}$

$\frac{-6.4}{16.6}$

-1.92

Areas		Cub Yds	
Exc	Emb	Exc	Emb.
9006		61.7	Sta 808+90 to 810+85 Exc 894.0
		S. 26.5	
		156.8	Class Top 3 ft of orig. Section
157.83			$\frac{2}{3}$ Lo. R. = 208.4 Cu.
			Slips Lo. R. = 99.6 "
		S. 15.5	Balance of Cut Solid Rock
		187.8	
186.30			Total Lo. Rock = 308.0 Cu.
		S. 13.2	" Solid " 586.0 "
		135.8	
180.41			Haul 3075 So from
			" 830 N "
		S. 11.4	" 330 from 809+85 to 808+25 = 530. ✓
		154.4	" 110 " 810+20 to 811+50 = 145. ✓
			" 20 " 810+10 to 813+30 = 65 ✓
97.44			Total Haul 740 ✓
		S. 13.0	
		71.3	
12.55	0.0		
		31	24 Sta 810+65 to 811+85 ✓
0.0	9.71	850.5	Emb'd 251.6 Cu. ✓
		43.5 = 0.456	
		894.0	13.7 Made from Cut So
		39.65	
			30.3
		69.47	
			50.3
		111.58	
			104.0
			200.7 ✓

Stations	Grade	L	C	R
811+55		$\begin{array}{r} -2.2 \\ 10.3 \end{array}$	$\begin{array}{r} -4.8 \end{array}$	$\begin{array}{r} -9.0 \\ 20.5 \end{array}$
+75		$\begin{array}{r} 0.0 \\ 8.0 \end{array}$	$\begin{array}{r} -7.1 \end{array}$	$\begin{array}{r} -2.3 \\ 10.5 \end{array}$
+85		$\begin{array}{r} +2.0 \\ 8.5 \end{array}$	$\begin{array}{r} +1.0 \end{array}$	$\begin{array}{r} 0.0 \\ 8.0 \end{array}$
812	-192	$\begin{array}{r} +3.3 \\ 8.8 \end{array}$	$\begin{array}{r} +2.2 \end{array}$	$\begin{array}{r} +0.7 \\ 8.2 \end{array}$
+40		$\begin{array}{r} +3.0 \\ 8.7 \end{array}$	$\begin{array}{r} +2.4 \end{array}$	$\begin{array}{r} +2.4 \\ 8.6 \end{array}$
+85		$\begin{array}{r} +0.7 \\ 8.2 \end{array}$	$\begin{array}{r} +0.5 \end{array}$	$\begin{array}{r} 0.0 \\ 8.0 \end{array}$
+95		$\begin{array}{r} 0.0 \\ 8.0 \end{array}$	$\begin{array}{r} -0.3 \end{array}$	$\begin{array}{r} -0.7 \\ 8.1 \end{array}$
4.813	338400			
813+15		$\begin{array}{r} -7.3 \\ 10.5 \end{array}$	$\begin{array}{r} -2.4 \end{array}$	$\begin{array}{r} -2.6 \\ 10.9 \end{array}$
+50	-140	$\begin{array}{r} -10.3 \\ 22.5 \end{array}$	$\begin{array}{r} -7.6 \end{array}$	$\begin{array}{r} -13.8 \\ 27.7 \end{array}$
+65		$\begin{array}{r} -7.0 \\ 17.5 \end{array}$	$\begin{array}{r} -12.5 \\ 10.8 \end{array}$	$\begin{array}{r} -9.8 \\ 13.0 \end{array}$
				$\begin{array}{r} 21.7 \end{array}$

Areas

Cub. Yds

Exc

Emb

Exc

Emb.

200.7 ✓

113.12

48.6

0.0

1823

20

23

251.6 ✓

16.25

0.0

Sta 811+75 to 812+95 Exp 115.1 Cy. ✓

14.2 Class 90% Lo Rock = 103.6 ✓

10% Solid v = 11.5 ✓

34.70

Haul 55.1 M. free

57.1 " 60 pms 812+10 to 813+30 = 70 yds haul ✓

42.36

41.0

685

0.0

0.8 ✓

0.6 Sta 812+85 to 814 ✓

0.0

486

115.1 ✓

Emb't 574.4 Cuts ✓

17.7 Made from Cuts.

42.83

206.1

275.11

158.5

295.43

191.5

574.4 ✓

Stations Grade

L

C

R

814

$\frac{0.0}{8.0}$

0.0

$\frac{0.0}{8.0}$

+15

$\frac{+2.6}{8.7}$

$\frac{+2.5}{2.5}$

$\frac{+2.2}{8.6}$ $\frac{+2.2}{17.0}$

R.B.m.R

16.0

+50

$\frac{+5.6}{9.4}$

$\frac{+5.4}{5.4}$

$\frac{+4.5}{9.1}$ $\frac{+3.0}{21.0}$

18.0

815

$\frac{+3.0}{8.8}$

$\frac{+2.8}{2.8}$

$\frac{+2.4}{8.6}$ $\frac{+2.0}{22.8}$

22.0

+30

$\frac{0.0}{8.0}$

0.0

$\frac{0.0}{21.0}$

+65

$\frac{-4.3}{13.5}$

$\frac{-4.4}{4.4}$

$\frac{-4.6}{13.9}$

+80

$\frac{-1.6}{9.4}$

$\frac{-3.3}{3.3}$

$\frac{-6.6}{16.9}$

816

$\frac{-0.7}{8.0}$

$\frac{-1.6}{1.6}$

$\frac{-2.6}{10.9}$

817

$\frac{-0.6}{7.9}$

$\frac{-1.2}{1.2}$

$\frac{-1.8}{9.7}$

+35

$\frac{-5.2}{14.8}$

$\frac{-5.4}{5.4}$

$\frac{-7.0}{16.5}$

Areas
Exc. Emb. Cub. Yds
Exc. Emb.

0.0

0.0

Sta 8146815730 Exp 436.0 Cy.

Class Slip Lo Rock 19.7 Cy.

Balance Solid Rock 416.3 "

R.B.M.R

160

58.87

163

Slp 6.1 Have 307.6 So far
124.3 " 90.11 "

180

132.95

S. 12.4
194.5

220

77.12

S. 1.2
42.8

0.0

0.0

397.6
38.4 = 1/2 56.

436.0

59.3 Sta 8157306818+50

91.43

Embl't including

Spur = 749.6 Cy.

45.4 165.6 made from

outs

Balance 584.0

less 5% 29.2

36.6 Borrow 554.8 Cy.

Class Earth

26.67

84.5

18.96

94.7

127.21

148.9

469.4

✓

Section 16

Station	Grade	L	C	R
817+95		$\frac{0.0}{8.0}$	-0.4	$\frac{1.0}{8.5}$
818+50		$\frac{+1.2}{8.3}$	+0.8	$\frac{0.0}{8.0}$
819		$\frac{+1.6}{8.4}$	+0.8	$\frac{0.0}{8.0}$

Turkey Creek Spur.

820 Main Line		$\frac{0.0}{8.0}$		
= 0 Spur	3374.20			
+50		$\frac{+3.2}{8.8}$	$\frac{+3.2}{58.50}$	
1		$\frac{0.0}{8.0}$	0.0	
+50	3376.30	$\frac{0.0}{7.0}$	0.0	
2		$\frac{-1.4}{9.1}$	$\frac{-0.8}{0.9}$	$\frac{0.0}{6.5}$
+50		$\frac{-4.4}{13.6}$	4.6	$\frac{0.0}{6.9}$
+60		$\frac{-7.2}{17.8}$	$\frac{-5.5}{1.8}$	$\frac{0.0}{4.3}$
+70		$\frac{-2.9}{11.4}$	$\frac{-5.1}{1.3}$	$\frac{0.0}{5.0}$
3		$\frac{-1.5}{9.3}$	0.4	$\frac{-0.4}{6.3}$
+56		$\frac{-0.6}{7.9}$	0.7	$\frac{-0.8}{5.7}$
+60		$\frac{0.0}{8.0}$	0.2	$\frac{-0.2}{5.7}$
4		$\frac{-1.5}{9.3}$	0.8	$\frac{-0.4}{4.1}$
+20		$\frac{-4.2}{13.3}$	4.6	$\frac{0.0}{6.8}$
4+60		$\frac{0.0}{8.0}$	0.0	$\frac{0.0}{5.3}$
= 815+40 Main Line				

Areas Cub. Yds.
Exc Emb Exc Emb

0.0

680

469.4 ✓

7.7

4.6

1132

00

474.0 ✓

275.6 in Spur

749.6 ✓

22.5

30.2

1296

12.0

in extra width for Spur ✓

42.2

817.95

Sta 818+50 to 819 Exp 42.2 Cy. Earth ✓

0.0

Have 80 ft

6.0

9.60

6.0

0.0

12.0 ✓

0.0

13.7

1297

69.9

62.55

27.4

85.52

26.3

56.59

36.7

97.5

17.8

96.2

2.1

206

10.1

11.55

26.7

60.65

44.9

00

275.6 ✓

Section 16

French Lilly Spur.

Stations	Grade.	L	C	R
768+50	Main Line = 0	0.0		0.0
0+55		8.0		8.0
1	351970	-6.1		0.0
		16.2	5.2	7.0
		-8.3		0.0
+10		19.5	7.0	7.0
		-7.0		-4.0
+30		17.5	4.8	13.0
		4.8		-2.5
+50		14.2	3.8	10.8
		-5.5		-3.0
+60		15.3	3.7	11.5
		-8.0		-8.3
+80		19.0	6.9	19.5
		-10.4		-7.0
2		22.6	9.6	17.5
		-7.0		-3.6
+25		17.5	5.6	12.4
		-1.7		0.8
+50	351870	9.6	7.2	8.5
		0.0		0.0
+55		8.0	0.0	16.0
		-0.7	0.0	+3.9
+80		8.1	6.0	17.0
		-0.8		+2.3
3		8.2	0.0	16.6
		-1.9		0.0
+10		9.9	7.9	16.0
		-2.3	-2.2	-3.0
+20		10.5	5.0	20.5
		-2.8		0.0
+30		11.2	7.6	16.0
		-2.6		+2.8
+50		10.9	0.0	16.7
		-2.9		0.0
+75		11.4	7.4	16.4
		-2.7	-2.0	+3.8
4		11.1	6.0	17.0
		-2.6	-2.5	+3.5
+25		10.9	9.0	16.9

Areas		Cub. Yds.		
Cut	Fill	Exc.	Emb.	
	0.0		68.1	Sta 0+55 to 2+55
	81.67		37.7	Embk + 792.7 cu.
	121.80			Made from Cuts
	111.70		68.4	86.5 in Main Line
	73.05		28.2	
	79.33		99.7	
	189.88		164.2	
	253.38		173.2	
	120.82		64.9	
	19.43		1.8	
0.0	0.0	792.7	0.3	Sta 2+55 to 3+10
59.95	1.08	27.8	0.3	Exp 54.5 Cuyds.
9.20	2.80	25.6	1.4	<u>Class Lo Rock</u>
0.0	31.25	1.1	6.3	
		54.5		
	83.75		21.3	
0.0	31.56		21.4	Sta 3+30 to 4+60
		28	15.1	Exp 84.8 Cuyds.
11.20	9.10			<u>Class Lo Rock</u>
		8.7	14.9	
7.65	23.03		14.4	
40.46	8.05	22.2	6.5	
30.83	5.98	32.9	17.4	
		17.4	16.3	
		84.0	117.9	

Section 16
French Lilly Spur - continued -

Stations	Grade	L	C	R
4+50		$\frac{50}{145}$	$\frac{71}{71}$	$\frac{80}{71} + \frac{15}{164}$
+60		$\frac{65}{168}$	$\frac{30}{30}$	$\frac{80}{160}$
+70	3518.70			

Box Culverts

Stations	Size - inside	Lumber Feet B.M.
769+20	10" x 30" - 21'	525
775+45	12" x 28" - 32'	1096
782+30	Partition in Middle 24" x 66" - 90'	5292
790+25	12" x 30" - 32'	822
794+30	10" x 24" - 42'	894
799+30	12" x 30" - 52'	1332
805+05	24" x 42" - 62'	2432
808+60	24" x 30" - 48'	1583
813+55	24" x 30" - 47'	1553
817+40	10" x 24" - 46'	974
		16503

Areas		Cub. Yds		Stations 4470 Embl't 145.6 Cnt. made from Cuts
Cut	Fill	Exc.	Emb.	
6.75	29.33	84.0	77.9	
		0.8	18.8	
0.0	71.95	84.8	8.9	
	0.0		145.6	

Excavations for Box Culverts

ber. S.M.	Size of Excavation	Cubic Yards.		
		Totals	Ea.	L.R. S.R.

1 x 3 x 40

4.4

4.4

For account

No. Exc.

$$\left\{ \begin{array}{l} 0.5 \times 2.5 \times 14 \\ 2 \times 4 \times 8 \\ 2 \times 3.5 \times 10 \end{array} \right\}$$

0.6

0.6

5.0

5.0

1 x 2 x 35

2.6

2.6

1 x 4 x 50

7.3

7.3

1.5 x 5 x 23

6.4

6.4

1.6 x 5 x 26

7.7

7.7

1.5 x 4 x 12

3.0

3.0

5 x 7 x 23

29.9

29.9

66.9

29.9

7.9

29.1

44

Section 16

Ditches

Station	Size	Cubic Yards			
		Total	LR	SR	
773					
774+10	Side Ditch on R	8.2		8.2	
774+40					
774+95	Surf. " " L 2x2.5x35	6.4		6.4	✓
774+90	Slope " " R 2x5x30	11.1		11.1	✓
775+90	" " " L 1.5x1.5x45	3.8		3.8	✓
775+90 1/2					
779+90	Side " " L	29.6		29.6	
779+80 1/2					
781+70	Surf " " L 1x4x190	18.1	14.0	14.1	✓
780+60 7/10					
780+40	Slope " " R 2x4x30	8.8		8.8	✓
783+15 7/10					
785+65	Side " " L	18.5		9.2	9.3
796+15 7/10					
798+60	Slope " " L { 1x4x85 1.5x6x50 1.5x4x110 }	12.6 41.1	12.6	41.1	✓
811+75 7/10					
812+95	Side " " L	8.9		8.9	
817+90 1/2					
819	" " " R & L	16.3	16.3		
		193.4	42.9	85.9	64.6

Borrow for Dykes & Berms.

775+90	Dyke in Cut Ditch 1x5x10	1.9		1.9	
799	False Berm 5.5x6x55	67.2	33.6	33.6	✓
817+40	for Box Replace Matt excavated	30.0	30.0		
		99.1	63.6	35.5	✓

Section 16

76

Clearing

Stations	Width	Square feet
771 to 785	50	70000 ✓
784 Borrow Pit out	70x160	11200 ✓
787 " " " R	30x50	1500 ✓
798 " " " R	75x225	16875 ✓
799+50 " " " "	60x160	9600 ✓
790 to 805	50	75000 ✓
		184175 ✓

Clearing w/ery light allow $\frac{1}{2}$ = 2,11 Acres.

1971

SECTION 16

Page	Acres. Clearing	Excavation-Cub. Yds.				Cub. Yds. Total in Banks.
		Total in Cut	Earth	Loose Rock	Solid Rock	
54	✓					2172 ✓
54	✓	360.3 ✓			360.3 ✓	4.2 ✓
55	✓	2050.5 ✓			2050.5 ✓	
56	✓	15.0 ✓			15.0 ✓	
58	✓					1678.9 ✓
58	✓	477.2 ✓		29.9 ✓	447.3 ✓	
59	✓					3476.5 ✓
60	✓	241.1 ✓		124.6 ✓	116.5 ✓	
61	✓	9.5 ✓			9.5 ✓	
62	✓	12.2 ✓		12.2 ✓		
62	✓	1.7 ✓		1.7 ✓		1027.9 ✓
64	✓	813.2 ✓		240.1 ✓	573.1 ✓	319.5 ✓
65	✓	207.5 ✓	138.3 ✓	69.2 ✓		11.1 ✓
66	✓					4337.8 ✓
67	✓	142.4 ✓	47.4 ✓	95.0 ✓		170.2 ✓
67	✓	1626.0 ✓		610.0 ✓	1016.0 ✓	
68	✓	63.5 ✓			63.5 ✓	575.3 ✓
69	✓					2172.7 ✓
70	✓	894.0 ✓		308.0 ✓	586.0 ✓	251.6 ✓
71	✓	115.1 ✓		103.6 ✓	11.5 ✓	574.4 ✓
72	✓	436.0 ✓		19.7 ✓	416.3 ✓	749.6 ✓
73	✓	42.2 ✓	42.2 ✓			
74	✓	54.5 ✓		54.5 ✓		792.7 ✓
74	✓	84.8 ✓		84.8 ✓		
75	✓					145.6 ✓
75	✓	66.9 ✓	29.9 ✓	7.9 ✓	29.1 ✓	Banks
76	211 ✓	193.4 ✓	42.9 ✓	85.9 ✓	64.6 ✓	
76	✓					49.1 ✓
211		7907.0	300.7	1847.1	5759.2	16589.0
						16604.3

SUMMARY

77

ds. in ks.	Cu. Yds. Bank made from Cuts	Cu. Yds. Deducted for Shrinkage	Borrow- Earth	Cu. Yds. Loose Rock	Cu. Yds. Feet BM. Hauled Lumber 100' in Culverts
17.2 ✓	217.2 ✓				
4.2 ✓	4.2 ✓				60. ✓
					4790. ✓
8.9 ✓	1678.9 ✓				
6.5 ✓	810.5 ✓	158.3 ✓	2556.5 ✓	451.2 ✓	490. ✓ 1400. ✓ 450 ✓
7.9 ✓	905.5 ✓		122.4 ✓		
9.5 ✓	319.5 ✓				840. ✓
11.1 ✓	11.1 ✓				300. ✓
57.8 ✓	402.5 ✓	196.7 ✓	3364.7 ✓	373.9 ✓	1200. ✓
10.2 ✓	170.2 ✓				130. ✓
5.3 ✓	575.3 ✓				4010. ✓
12.7 ✓	2172.7 ✓				
51.6 ✓	251.6 ✓				740. ✓
74.4 ✓	574.4 ✓				70 ✓
49.6 ✓	165.6 ✓	29.2 ✓	554.8 ✓		
72.7 ✓	792.7 ✓				
45.6 ✓	145.6 ✓				
9.1 ✓			636 ✓	355 ✓	16503 ✓
89.0 ✓	8682.2 ✓	384.2 ✓	6662.0 ✓	860.6 ✓	14480 ✓
04.3 ✓	8697.5 ✓				16503 ✓

1917

SECTION 16. COST.

CLEARING, 2.11 ACRES,	@ \$35 ⁰⁰ =	\$7385
EXCAVATION, EARTH, 300.7 CU. YDS.,	@ 0.14 =	42.10
" , L. ROCK, 1847.1 " " "	" 0.32 =	591.07
" , S. ROCK, 5759.2 " " "	" 0.80 =	4607.36
BORROW, EARTH, 6662.0 " " "	" 0.12 =	799.44
" , L. ROCK, 860.6 " " "	" 0.30 =	258.18
HAUL, 100 FT., 14480 " " "	" 0.015 =	217.20
LUMBER, FT. B.M., 16503	\$12 ⁰⁰ =	198.04
TOTAL	\$	6787.24

Bench Marks

78

ST.

	On Hub	60' L	670	3701.83
7385	"	40' L	678+80	3770.90
42.10	"	70' L	688	3742.29
591.07	"	100' R	698	3707.90
607.36	"	60' R	708+50	3673.56
799.44	"	50' L	717+60	3645.05
258.18	"	30' L	722+40	3647.88
217.20	"	60' R	735	3610.95
980.4	"	60' R	743+50	3581.94
187.24	"	100' R	748	3576.30
	"	50' L	754+75	3557.41
	"	40' L	762	3537.48
	"	40' R	768	3518.67
	"	35' L	773+70	3500.08
	"	60' L	781+60	3466.78
	"	60' R	791+20	3442.63
	"	60' L	801+70	3413.96
	"	60' L	809+20	3399.88
	"	60' R	822	3374.52

2
400
8/24/04

Reference

L C R

665+68⁵ PS. 9x10 R

664+49 P.T.

671+88⁶ PS 9x10 L

671+53³ Back = P.T.
671+58¹ Ford

688+15³ P.T.

689+34.0 Back = PS 6x15 R
689+27¹ Ford

695+74 P.T.

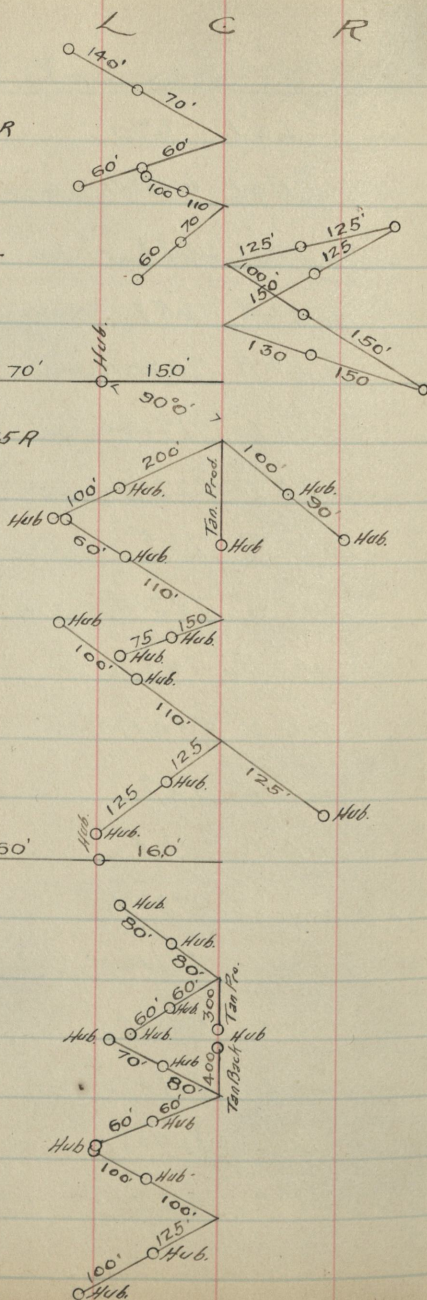
699+26¹ PC 4° L

703+32⁵ P.T.

713+49 PS 8x10 R

717+60¹ P.T.

725+49 PS 7x8 L



$$L \quad C \quad R$$

A hand-drawn map of a road network on a grid background. The map shows several roads connecting points labeled 'Hub' and 'Bac Tran'. Distances are marked along the roads: 100', 150', 160', 125', 150', 35', 35', 150', 170', 90', 125', 160', 90'. The roads form a complex shape with multiple loops and branches.

[illegible][illegible]

Hub Hub 100.53. 75. Hub.

25° 0' 40" 100'

$R \quad 0 \quad 100 \quad 120 \quad 120$

Hub. Hub.

75 75

60

Hub. Hub.

100 150 200

2 L

22

~~р. Онь~~

[illegible]

120' 120' 120' Hub 15

[illegible]

144	136'	136'
-----	------	------

66

66

67

67

67

68

68

68

69

69

70

71

71

72

